

Amateur Radio

Volume 78
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YOUR
ANTENNA**

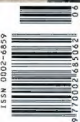
*Arena of Wonder
'Wholeheartedly
and Intensely
Amateur'.*

ANTENNAS FOR VHF AND ABOVE

**Our cover story:
Fishing for DX
at Port Adelaide**



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John Moyle Memorial National Field Day results inside
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Our cover this month

David VK5DCW at Birkenhead on Adelaide's Port River, near his salt water 'ground plane'. The shot is looking across the river to the lighthouse at the South Australian Maritime Museum in Port Adelaide. The light used to mark the river entrance some distance to the north.

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

Back Issues

Back Issues are available directly from the WIA National

Office (until stocks are exhausted), at \$8.00 each (including postage within Australia) to members.

Photostat copies

If back issues are unavailable, photocopies of articles are available to members at \$2.50 each (plus an additional \$2 for each additional issue in which the article appears).

Disclaimer

The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's oldest National Radio Society, founded 1910.

Representing

The Australian Amateur Radio Service

Member of the

International Amateur Radio Union

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Editorial

Peter Freeman VK3PF

Time flies

Where has the last month gone? It seems like only yesterday that I was tapping out the Editorial for the May issue, and I am already late in preparing the next one!

As usual during the part of the year with actual face to face teaching, work has been its very busy self. The imminent end of semester means that there are examination papers to prepare, assignments to mark, and next semester's material to prepare. As soon as all of those tasks are completed, there are exam papers to mark followed by results to collate. Such is modern academia, plus "they" expect us to prepare grant applications, do research and prepare learned papers for publication.

At the same time, I have been involved in the organisation of this year's GippsTech event, including the preparation of the material for the printed Proceedings volume from last year's event. More time at the keyboard, transforming material into a standard format (when supplied as requested) or deciding whether to bother such a transformation or simply to print the material as supplied – both options take time.

On top of those tasks, some silly person said that he would present at the WIA AGM..... oh well, there are a few nights left before I must hit the road to Canberra!

Contribute to your magazine

We have had many excellent articles submitted relating to the history of amateur radio in Australia, as regularly recognised by the Centenary Committee in this magazine. We also have a good stock of technical and general articles for the next few months. The down side is that authors may wait some months until their article appears in print. Do not panic – in all likelihood it will appear in due course. We have updated our processing procedures in an attempt to keep authors in the loop, so that they know when an article moves from one stage of our process to the next.

The one shortage that we have is in high quality, well composed high resolution photographs suitable for the magazine cover. It is preferable that such photos come with a story, so that the cover has a link to an article inside the magazine.

One of the tasks on the "to do" list for PubCom is to update our guidelines to authors, but the existing guidelines give a good outline of the needs of the production team. Feel free to submit photographs at smaller size (but make them at least 500 kB please), but do please set your digital camera to capture the image at the highest resolution possible. If you only shoot the image at 100 kB, there is no way to improve resolution. If you shoot the image at 3 MB (or even better, 10 MB), for example, you can save the file at the original resolution, then save it to a new file name at lower resolution for distribution.

If we think that the image would be better served (for the magazine) at higher resolution, we can ask you to send it to us. You never know – it may be cover material.

The entire *Amateur Radio* team welcomes your contributions. Of course, this includes material for each of our regular columns, club news items and state summaries. Where the news item is short, send it direct to the regular contributor. If you think that the item might make a short separate story, then send it in to the normal address for material for publication – see the left hand column on page one for details. I know that David VK3HZ and his team always find it difficult to find "news" during the winter months, when propagation in the southern parts is not as spectacular as during the summer months. The team is still interested in hearing about your activities – send in the reports and give them the task of decide if the news is worthy of inclusion. If your news does not make the grade, do not be put off – send in more news. You might make the grade next month.

Cheers, Peter VK3PF

MF

The Digital Dividend and the 6 metre band

The Department of Broadband, Communications and the Digital Economy describes the 'digital dividend' as the radiofrequency spectrum freed-up as a result of the switchover from analogue to digital television transmission.

One of the questions that we are asked most is what is happening with the 6 metre band following the closure of the Channel 0 television transmitters as a part of that switch-over.

The short answer is, I don't know.

But I do know what should happen.

Here is the text of a letter that I wrote on 11 May 2010 to Mr Chris Chapman, the Chairman and Chief Executive Officer of the Australian Communications and Media Authority:

"Dear Mr. Chapman

The WIA appreciates that to date the primary focus of the so called 'digital dividend', arising from the switchover to digital only television, has been the spectrum around 700 MHz.

The Wireless Institute of Australia, representing the amateur services in Australia, brings to your attention a consequence of the closure of television Channel 0, also resulting from the switchover to digital only television.

Article 5 of the Radio Regulations of the International Telecommunications Union allocates the band 50 – 54 MHz to the Amateur Service in Regions 2 and 3 subject to a number of footnotes, including footnote 168 which provides:

'Additional allocation: in Australia, China and the Dem. People's Rep. of Korea, the band 50 – 54 MHz is also allocated to the broadcasting service on a primary basis.'

In Region 1 there is an amateur secondary allocation in the band 50-52 MHz in the CEPT European Common Allocation Table.

To accommodate Channel 0, in Australia the band 50 - 52 MHz is allocated to broadcasting primary, with amateur secondary, subject to footnote AUS23, which provides:

'In the band 50 - 52 MHz, stations of the amateur service shall not cause harmful interference to stations of the broadcasting (television) service. Amateur operations in this band shall be subject to special conditions.'

Australian Radiofrequency Spectrum Plan (ARSP).

The band 50 - 54 MHz is of particular interest to the amateur service. Tropospheric scatter and sky-wave propagation (principally sporadic-E and occasional F-layer propagation at sunspot maxima) are used for longer distances, as well as auroral propagation at the higher latitudes. Meteor scatter has been used for Morse code and voice communications primarily during meteor showers. Newer computer-based techniques make meteor scatter a routine propagation mode for distances up to 2000 km.

Amateur advanced stations, amateur repeater stations and amateur beacon stations in New South Wales, Victoria, Queensland and the Australian Capital Territory are subject to various restrictions, including power and geographic restrictions in the band 50 - 52 MHz. In essence, such stations cannot operate within 120 kilometres from a Channel 0 main station, 60 kilometres of a television Channel 0 translator station and 60



WIA comment

Michael Owen
VK3KI

kilometres of a television translator station that has inputs on television channel - see sections 15, 36 and 43 of the Radiocommunications Licence Conditions (Amateur Licence) Determination No.1 of 1997 (the Amateur LCD).

Details of VHF television channel 0 stations are set out in Schedule 7 to the Amateur LCD.

The WIA requests that on the closure of the Channel 0 transmitters the allocation of broadcasting primary in the band 50 – 52 MHz be deleted and that the band be allocated amateur primary and that the ARSP be amended accordingly, with footnote AUS23 also being deleted.

Currently only amateur advanced stations are permitted to operate on the 50 - 54 MHz band, with amateur standard stations permitted to operate on the band 52 - 54 MHz. If the amateur service was to be allocated the band 50 - 52 MHz on a primary basis, the WIA would have no objection to amateur standard stations operating on the whole of the 50 - 54 MHz band.

It will also be necessary to amend the Amateur LCD. In particular Part 1 of Schedule 2 (Permitted frequencies and emission modes (amateur advanced stations)) will require amendment to reflect any changes to the ARSP.

Sections 15, 36 and 43 and Schedule 7 will become redundant.

Currently the Amateur LCD is under review, and given the incredible difficulty the Authority has had in finding resource to deal with such matters, it is suggested that the necessary amendments be formulated as part of the present review and incorporated in a schedule, to take effect when ACMA has published an appropriate notice in the Gazette.

No doubt Australia will seek to withdraw from footnote 168 at the next appropriate WRC.

As this is a matter of general interest, I will assume that you have no objection to its publication unless you advise me otherwise."

In short, we say that with the closure of television Channel 0 the band 50 - 52 MHz in Australia should revert to the ITU Region 3 allocation of 50 - 54 MHz amateur exclusive.

The letter also illustrates the complex framework of subordinate legislation that surrounds even the most obvious changes to the regulation of the radiofrequency spectrum in this country.

I suspect that to date, as is said in the letter, the focus of the government's investigations has been on the spectrum around 700 MHz, but we believe that it is now appropriate to draw attention to this important part of the amateur services family of frequencies.

WIA to purchase property

On 10 May 2010 the Wireless Institute of Australia executed a contract to purchase the premises it is presently renting at Unit 20, 11 – 13 Havelock Road, Bayswater.

The WIA has been renting the premises, part of an industrial estate, since October 2008. A warehouse with offices, it offers adequate space for the things that need to be stored – books for the bookshop, merchandise and the like, as well as valuable items such as the QSL collection.

Use of the premises for 18 months has satisfied the Directors that they meet the WIA's needs.

The Directors are considering calling the premises Andersson House, in honour of Henry Andersson VK8HA.

Henry was an Honorary Life Member of the WIA, the first national WIA Intruder Watch Coordinator, and ran the VK8 QSL Bureau for 38 years. He passed away on 6 October 2004. His will left his house and land at Humpty Doo, near Darwin, to the WIA. That generous bequest provided much of the funds necessary to acquire the premises at Bayswater.

Settlement will occur before 30 June.

VK100WIA on the Air

WIA President, Michael Owen VK3KI launched the WIA's special event callsign VK100WIA on 14 May 2010. The first contact was at 1024 AEST with WIA Secretary Geoff Atkinson VK3TL followed by Geoff Parker VK2ZC at 1028. Signal reports exchanged were 5 by 5 both ways.

The commemorative callsign for the Centenary of the foundation of the WIA in 1910 will be activated by WIA for the rest of May, including a station at the WIA Centenary Convention at Canberra from 26 to 31 May. From 1 June VK100WIA will be operated by a different WIA affiliated club every three days until the end of October.

Listen for VK100WIA on the amateurs bands or check the online logging system on the WIA website www.wia.org.au

The rules for the WIA Centenary Award are also on the WIA website.

A Gift

The other day a WIA member visited the office at Bayswater. He said he wanted to donate to the WIA and left \$500. He said he believed in what we are doing, but wanted to remain anonymous.

Michael Owen VK3KI WIA President said: "It is very hard to convey how much an act such as this lifts the heart of those who spend much time trying to make the WIA an organisation that properly represents the amateur service in our country and also provides a service for its members and is recognised by amateurs for doing that.

All I can say is, simply, thank you."

ACMA releases its paper "The Way Ahead – decisions and implementation options for the 400MHz band"

On Friday 30 April, the Australian Communications and Media Authority (ACMA) released its third discussion paper on the re-planning arrangements for the 400 MHz spectrum.

The WIA had provided detailed submissions regarding the 70 cm amateur band, and is a member of the Radiocommunications Consultative Committee 400 MHz working group, where industry provided advice to the ACMA on important issues.

The release of the paper coincided with the annual ACMA Radcoms 2010 Conference in Melbourne on 5 and 6 May 2010 where the preliminary outcomes were discussed. The WIA was represented by WIA Director Peter Young VK3MV.

ACMA confirmed that the segment between 430 to 440 MHz is out of scope for the purposes of the re-planning exercise. Within this band the amateur service is a secondary user to Defence: this will continue into the future.

In the spectrum segment 420 to 430 MHz, the amateur service has already been excluded in Melbourne, Perth and Sydney to allow use by government users. These exclusions will be extended to the rest of Australia over the coming years.

The 440–450 MHz band, which was out of scope in the previous Proposals paper, is now within the scope of this paper, as an option to assist in the transition to a 10 MHz duplex frequency split in the 450–470 MHz band. It seems that use of this spectrum may be temporary and once the re-arrangements are completed this segment will return to the existing arrangements.

The WIA will continue to participate in the ongoing ACMA consultations in respect of this part of the spectrum.

WIA at the Dayton Hamvention

This year's Hamvention theme was 'Amateur Radio Clubs Worldwide: The Lifeline' recognising the major contribution amateur radio clubs all over the world have made.

The weekend saw 18,000 amateurs from all parts of the world descend on Dayton this year including 15 VKs from VK2, VK3, VK4, VK5, VK7 and VK8.

In recognition of the WIA Centenary year WIA Director Chris Platt VK5CP, assisted by WIA Director Peter Young VK3MV, made a presentation at the Contesting Forum on the WIA's history and contesting in Australia featuring the involvement of clubs in field day activities.

EmComms information registrations reach two hundred

The WIA has received over 200 registrations for information on the WIA Emergency Communications Operator training.

There have been two "train the trainer" courses, with a third being organised shortly. 16 trainers, one or two from every state, have been trained and will be ready to deliver the Certificate 2 training.

The WIA is hopeful that the EmComm operator training will commence towards the end of June and progressively rolled out over the remainder of the year. A training application form will be placed on the WIA website for these training courses.

Part 5

Distance defeated, identity established

An arena of wonder

Peter Wolfenden VK3RV

We complete the five part history of early Australian amateur radio.

12 Conclusion

About twelve months before the first National Convention a number of Australian experimenters successfully received messages from the USA on short-wave. Barely six months after the convention, phone communication was established between Max Howden A3BQ in Melbourne and EJ Simmonds G2OD in the United Kingdom. Later Charles MacLurcan A2CM and Jack Davis A2DS in Sydney also worked G2OD on 85 metres (1).



Photo 1: Max Howden A3BQ. WIAA.

This was also the time that New Zealander Frank Bell Z4AA, on a back-blocks Otago sheep station, had his famous hour and a quarter, 19,000 km two-way contact with Cecil Goyder G2SZ at the Mill Hill School in London (2, 3).

There is little doubt that this was an exciting time when a whole new set of 'rules' had to be put into place because, once again, the experimenters were, as in the words of George Taylor, chairman of the first meeting of the Institute of Wireless Telegraphy: ".... like explorers of a strange country, where every step was a discovery ..." (4).

For the next 15 years, national conventions of the WIA were held in all capital cities in rotation and experimenters had exciting, fruitful and exasperating times until World War Two broke out when once again they had to close down their stations for the duration of that war (1).

It is also appropriate to briefly record that a deal of instability occurred within the experimenter's ranks between 1927 and 1937. An alternative society, initially known as

the Queensland Radio Transmitters League, was established in 1927. It later changed name to the Australian Radio Transmitters League (ARTL), still with headquarters in Queensland.

Spreading to most states and strengthened by issues relating to 'commercial interests', particularly in NSW, it brought considerable pressures to bear on the WIA which was the official, locally and internationally recognised Australian amateur's representative.

The majority of amateurs in Tasmania, South Australia and Victoria stood by the WIA (ARTLs were also established there) and following six months of negotiations during 1929, most state ARTLs merged with the WIA. The WA ARTL re-joined in 1932.

In NSW, a further organisation, the Amateur Radio Association was established and became affiliated



Photo 2: E.J. Simmonds G2OD. WIAA.

with the WIA in 1934. It was in effect a de facto WIA NSW Division (5). This situation remained until the IRE allowed the legal re-forming of the Wireless Institute (in NSW) during 1937.

Much of the instability during the decade was largely brought about by the apparent by-passing and/or misunderstandings of representation for the amateur transmitting members and the substantial growth in receiving only members, often coupled with the 'commercial interests' of some members (6, 7, 8).

Problems also occurred in Tasmania during 1925 when the Hobart Radio Experimenters Club separated from the Institute in a rather spectacular manner involving a black eye! (9)

As a 'living organisation', the WIA in all of its manifestations over the years, has undergone many changes to reflect the issues of the times and interests of its members. Representing all amateur experimenters to the authorities was one of the initial aims of our forebears and it is still the pinnacle issue for the WIA today.

Deregulation has brought about additional responsibilities which our first office bearers, even in their wildest dreams, would have never thought possible.

Over time, the emphasis of our

hobby has also undergone changes together with everything else in society, at both national and international levels - and that is healthy; but there is little doubt that the need for local and international representation is just as important today as it was 100 years ago.

Consequently, Australian radio amateurs can rightly celebrate the establishment of the Wireless Institute of Australia, their representative organisation, which came into existence as the Institute of Wireless Telegraphy of Australia, in Sydney, 100 years ago - the oldest group of such like minded people in the world.

And in the words of Major Leo Feenaghty VK4LJ, past secretary of the ARTL and later editor of QTC, the official journal of the WIA during 1930-31, "The letters WIA in our mind stand not only for 'Wireless Institute of Australia' but also and essentially for -

'Wholeheartedly and Intensely Amateur'! (10)

In days of old,
when hams were bold
and sideband not invented.

Words were passed
by pounding brass,
and all were quite contented!

With acknowledgement, and apol-

ogies, to someone from long ago!!

Contented for a while only, because at the Second Annual Convention of the WIA held in Perth, in August 1925, Esperanto was adopted as the Official International Language for 'phone' communications, problems with interference from Government stations was discussed and of the 1235 experimenters in Australia only 90 were licensed to transmit! There was much work to do!

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Photo 3: (VK)5JH c1927. WIAA

Arena of Wonder

Summary of our Early History

Prior to the Wireless Telegraphy Act of 1905 there was no real regulatory control of the radio spectrum.

Initially, the government was reluctant to license 'private experimenters' or anyone else for that matter as revenue from the wired telegraph system was considerable and the infant Wireless Telegraphy was initially considered to be of little use.

Experimenters were often considered to be a hindrance by the government and its agencies; the only potentially worthwhile use of wireless telegraphy was for communicating with ships at sea. Thankfully, this attitude did change later.

Many adherents could see the potential of wireless in all of its forms.

The need for organisations to represent the experimenters, and for that matter, potential commercial users, was apparent from the beginning of licensed operation in 1905 but because of increasing official activity, was essential by 1910!

Just before WWI, the interest in wireless was growing rapidly and a degree of logical control by the authorities was developing although often lagging demand.

WWI caused the closure of all experimental stations in August 1914 and consequently, societies and clubs became largely redundant because transmission and reception was disallowed and many club members enlisted in the services.

Following WWI, the Navy was reluctant to relinquish control of the radio spectrum which generated much angst amongst experimenters and potential commercial users alike.

Significant advances in technology took place during WWI and many could now see an even greater potential for wireless and perhaps the ability to make money from it.

Divisions between part-time and 'professional' experimenters and those who were already working in the 'wireless business' caused factions to develop and temporarily blurred goals for the future.

It appears that there was much back-room discussion between movers and shakers with regard to just what or who the various Clubs/Institutes represented.

The dust finally appeared to settle at about the time that the sealed sets scheme was abolished and open or normal broadcasting began with the establishment of class A (National) and B (Commercial) broadcasting stations.

The May 1924 Federation meeting in Melbourne cleared much of the air as far as a nation-wide organisation representing the experimenters was concerned, and it also appears to be the time that the regulating authorities and the government were at last fully in control of the wireless genie!

The NSW Institute was very influential in the early days because of its structure and some of the individuals involved with it; but there

were also divisions within because of perceived conflicting interests. It was not until the truly professional organisation, the IRE relinquished its interest in the Wireless Institute during 1937 that all parties were apparently satisfied.

There is little doubt that two strong wireless groups emerged from that meeting in 1910 at the Australia Hotel in Sydney. The group representing the professionals – The Institution of Radio Engineers and that representing the experimenters, the Wireless Institute of Australia!

100 years on, the experimenters, now known as radio amateurs, can legitimately celebrate the establishment of their representative organisation – the oldest such group in the world!

Acknowledgements

Directors of Wireless Institute of Australia for access to the Institute's Archive.

Chris Long VK3AML for access to his private document archive and guidance in preparing this article.

Prahran Mechanics' Institute for



Photo 4: "Makers of Radio History - Transmitting and receiving apparatus that has created short wave records." Wireless Exhibition at Melbourne Town Hall May 1925. Popular Radio Weekly, 27 May, 1925.

Cover Story

Gone fishing – for DX

A mobile alternative to the Squid Pole

David Crail VK5DWC

Squid poles in varying configurations have become very popular as car mounted portable antennas, returning very good results, but driving with a nine metre pole fully extended can present a few problems.

An alternative, also from your local tackle shop, is to use a surf fishing rod to make a truly mobile antenna, and still get very good results. I recently made a 3.6 metre helical whip, using a fishing rod, and in the short time I have been using it, the results have far exceeded my expectations.

Being faced with the blights of suburbia, living on a small block of land which restricts the size and type of antenna I can use, and with lots of QRM thrown in for good measure, going mobile seemed to be a good alternative. I could at least get away from the QRM. I was running a FT-897 (now a FT-857) barefoot into a four metre whip made from parts of a Buddipole antenna system (two accessory arms, plus a long, 2.9 metre telescopic whip), and using a SG-237 Smartuner to match the antenna, for my mobile station. My mobile station runs off two 26 AH gel cell batteries in parallel, which are not yet connected to the car's charging system so time mobile is restricted.

This setup allowed me to work all HF bands, with lots of good DX, but it had two major drawbacks. One is that even with the antenna mounted on a tow bar bracket, it was 10 cm over the maximum legal height of 4.3 metres for the road, and the other being that the Buddipole antenna parts, while excellent portable antennas, and returning exceptional results mobile, were feeling the affects of 12 months of mobile abuse. The telescopic whip was starting to become a little wobbly at the joints, like me, and shortening it a little to bring it down to legal height made it difficult to tune, so I had to look for an alternative.

I had been looking at various inexpensive options including making a slightly shorter antenna with a top hat to increase its electrical height, but constructing one sturdy enough for mobile use was problematic. I was looking to have an antenna with a natural resonance on 20 metres, yet could be tuned on all other HF bands with the SG-237.

I had a two piece 3.6 metre carbon fibre fishing rod which had been gathering dust in my shed for the past 15 years, so I figured that it would make a good base to experiment with. Measurements showed the

height above ground after mounting it would be 4.06 metres, which would be under the maximum legal road height. Now it was time to stop throwing ideas around in my head, and start putting them into practice.

Putting It All Together

I stripped all the runners and reel mount off the rod, and cut the wooden stock off at the base of the carbon fibre blank with a hacksaw, leaving a wooden plug in the end of the rod. This allowed me to drill an 11.5 mm hole in it, just the right size to allow a 12.7 mm (½ inch) stud to be



Photo 1: A close up of the antenna mount, showing the end to the tag soldered on to the copper washer.



Photo 2: The join in the wire where the rod joins, utilising the bullet connector, allowing the antenna to come apart in two pieces

tightly screwed in. The 12.7 mm size was chosen as I am using Mobile One mounting hardware (base and spring) which has the standard hardware store variety 12.7 mm thread. Well done Mobile One.

I bought a length of 12.7 mm brass all-thread from the hardware store, and screwed it into the hole I drilled in the base of the rod. I marked the all-thread at the base of the rod, and then removed it. With a piece of copper strip left over from my base station earth, I fashioned a large washer, with a tag for soldering the antenna wire to. I drilled an 11.5 mm hole in the middle, and then screwed it onto the all-thread up to the mark I made. The washer was secured to it by soldering it in place. After putting a liberal amount of super strength Araldite in the hole in the wooden plug, I screwed the all-thread back in, right up to, and hard against the copper washer. I then cut the all-thread with a hacksaw, leaving about 25 mm sticking out from the bottom of the rod. This stud screws into the mounting spring.

I had previously purchased a roll of domestic grade (a very patriotic Ozzy green and gold) earth wire for

the purpose of experimenting with wire antennas, so I cut off 5.2 metres, the length chosen only because that linear length would put me pretty well in the ball park of the 20 metre band. I soldered one end to the tag on the copper washer (see Photo 1), and coiled it evenly along the whole length of the fishing rod, temporarily securing it at the top with a cable tie. It worked out to be roughly 65 mm per turn. After testing, I cut the wire where the two halves of the rod joined, and put a bullet connector (see Photo 2) on each end, to allow the antenna to come apart in two pieces. I also Araldited the wire to each end of the rod sections, to permanently secure them in place, but it is advisable to leave that as the very last thing you do, after all the testing is done, and you are happy with the results. Once this glue is set, you will have a real job removing the wire afterwards, if you need to make adjustments.

On Air Testing

Now it was time to put it to the test. It was near midnight on Friday, 2nd October, the night before the 2009 Oceania contest. After mounting it on the car, which is parked on the

street in front of my house, I fired up the FT-857 and went through the HF bands, tuning up on five watts, to check the SWR. The SG-237 had no trouble finding a 1:1 match on all bands, as expected. This auto coupler is that good it will virtually tune a paper clip. What followed was a totally unexpected bonus. I thought I would see if it would tune on 160 metres. The SG-237 manual suggested it would not, but nothing ventured, nothing gained. After a lot of clattering of relays, and the SWR meter at full scale, it finally found a 1:1 match. If that was not enough, I was also able to tune 6 metres as well.

Now for some on air tests! At that hour of the night, the only English speaking activity I found was on 80 metres with the Australia Wide Night Owls and Insomniacs Net, so after tuning, I turned up the power to 100 watts, and put out a call, and VK2TEZ responded, and 57s were copied both ways. I did not have time for a lot of radio the next day, but managed a good contact with ZS1SR on the ANZA Net, plus a few VKs on 20 and 40 metres, with a 57, a 58, and three 59s received from the interstates, and a 59+20 from a local ham.

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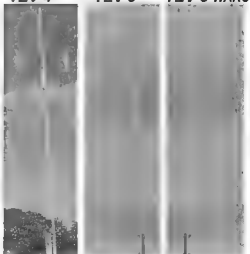
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New Tet-Emtron Vertical Range

TEV-4

TEV-3

TEV-3 WARC



Antenna	TEV-4	TEV-3	TEV-3 WARC
FREQUENCY	7, 14, 21, 28 MHz	14, 21, 28 MHz	10, 15, 24 MHz
ELEMENT HEIGHT	4090 mm	3800 mm	5025 mm
FEED IMPEDANCE	50 ohm	50 ohm	50 ohm
Max. RADIAL LENGTH	10.7 metres	5 metres	7.5 metres
SWR	1.5 or less	1.5 or less	1.5 or less
POWER RATING	1 kW	1 kW	1 kW

Sunday morning, I was able to work 160 metres for the first time, and listened to the WIA news bulletin on that band, and joined in the net that followed. After church that evening, my plan was to go to St Kilda, on the coast just north of Adelaide. The town has St Vincent Gulf on the west, large salt water evaporation lakes on its east, and mangroves to the north and south, so being virtually surrounded by salt water, it makes (in theory) a good spot for some DX. Before I got out of the church car

park though, I fired up the rig, and had a quick tune around on 20 metres to see who was on. There was a Russian club station (RK0LWP) coming in at a 57, so I quickly checked to see if all was clear around the antenna, then put out a call. The response was immediate, with a 55 returned. This was followed shortly after with an each way exchange of 58s with JA7NVF. Two good DX QSOs, and I had not even left the car park, and no salt water for kilometres.

When I arrived at St Kilda, I worked two stations in California on 40 metres, another two JAs on 20 metres, plus one on 17 metres, and then China and Brunei on 20 metres before calling it a night, as the battery was getting low. The worst signal report I received being a 55 from one of the Californian stations. After working the last JA, I was called by VK6MG, who was listening on the side, and who wanted to know what I was running for mobile.

In the first month, with the limited time I get to spend on the air mobile (determined largely by limited battery life, and juggling other commitments), I have clocked up 54 DX QSOs, spanning all seven

continents. These have been on 40, 20, 17, 15 and 10 metres, the first time I have worked DX on 10 and anything at all on 17. Not bad for the first month's fishing. I have also been able to work all bands so far with the exception of 30 metres, only because of lack of activity on that band, from 160 through to 6 metres. Even had a couple of DX QSOs while mobile in motion, one with ZL1TBA on 40 metres with 57 both ways and the other with KH6QR on 20 metres with a 57 sent and a 55 returned. Each

way signal reports for both of these were identical to when I worked them from home with my FT-897 into a G5RV. Driving while operating the radio is something I prefer not to do though, as I like to keep my attention on the road while driving. I am the wrong gender for multitasking.

Tuning is a breeze. Just a short one to two second whistle into

the microphone and it is done. 80 metres through to 6 metres tunes almost instantly, but 160 metres can be a little temperamental at times, depending on the surrounds.

Directly feeding the antenna from the rig with coax showed an SWR reading of 3:1 at the bottom end of the 20 metre band, and 2:1 to the top end. At the bottom end of 17 metres, the SWR was 4:1. Without an antenna analyzer, I can only estimate that it is resonant somewhere around 15 MHz.

Sound Advice

A word of caution, however, to anyone contemplating making one. This antenna is high. Read clearance signs before going under bridges, into undercover car parks, or into your local service station to fill up. Even though it is under the maximum

legal height for the road, and will safely clear power lines, it can be a real fluro buster

It also pays to have a small cord loosely looped around the antenna (see Photo 2) and tied off either in the boot, or to your roof rack. This is to stop the antenna swaying back too far, which can not only be a little disconcerting to other motorists, but if you have to stop suddenly, the antenna will not swing forward, and hit the back of your car. I am not speaking through personal experience, but on sound advice given by a fellow ham with many years of experience mobile.

The antenna has survived the occasional encounter with low trees, and has come away completely unscathed. I am not sure about the trees, though.

Summary

I will not say this is the perfect antenna, as all HF mobile antennas are a compromise, but it has shown itself to be a very good performing all-bander. There are still a number of things I can do to improve performance, and they will happen in due time, but what I have here is a good foundation to build on.

I must give credit where credit is due though. The antenna is only a part of a system. The car, radio, tuner, antenna all contribute to the performance of a mobile station, but the real magic with this station lies in that little box between the antenna and the radio, the SG-237 Smarttuner, manufactured by SGC in the USA. I cannot speak too highly of it. Whether the antenna will work as well with other tuners, I know not. As the antenna itself costs very little to make, all you can do is give it a try. You will never know, unless you give it a go.

Going mobile, you can expect to get stomped on in a pile up, but as with fishing, patience and persistence eventually pays off. There are times though, where I have managed to bust through a pile up, and the feeling is like hooking that big one that did not get away.

Tight lines and good DXing from David VK5DWC/mobile.

Testing your antenna

Ted Thrift VK2ARA and Ross Pittard VK3CE

After collecting all the test gear we discussed in last November's AR magazine it is about time we find out what one does with it, if and when you have a fault.

This month Ted Thrift VK2ARA, the WIA Club Coordinator and an Assessor has provided an article on tracking down problems in your antenna system. Faults are not always easy to locate and Ted goes through the testing in a logical manner. I suggest all Foundation licensees keep this article as a handy reference.

Testing your antenna

So you can no longer hear anything and you think your antenna system is faulty. It is very likely that it is, or at least some part of it is faulty.

To repair the fault, we first have to find it. To do this we have to treat your antenna system in exactly the same way as fault finding inside a radio. After all, it is an electrical circuit and if not all correct, it will not work in the way that you expect.

Parts of the antenna system

- The support poles and ropes.
- The antenna insulators.
- The wire elements.
- The feed point or balun.
- The transmission line.
- The entry point to the shack.
- The patch cable to the radio.
- Any one or more of the above can be the cause of your problem.

Thoughts about the antenna

- Is it a balanced half wave dipole?
- Is it an OCF dipole?
- Is it a multi-band antenna, for example, a G5RV?
- What bands is it designed for?

Thoughts about the radio

- Has it a built in antenna tuner?
- Do you use an add-on antenna tuner?
- Can you transmit a carrier signal on any band?

- Can you adjust the power level of the carrier?

Before we start testing

If your radio has a built in "auto-tuner" has it by now been set to "attempt" to match your antenna system, *faults and all*. You may have also tried other bands to see if you can get "something" to work.

To find the fault we must test the system on the primary band for which it was designed.

Keep this in mind when you start testing.

Test equipment

In addition to your radio, you will need at least the following items.

- A suitable PWR/SWR meter.
- A suitable 50 ohm dummy load.
- At least one tested 50 ohm patch cable

Your first test

This is to ensure that both your radio and your test equipment are working correctly.

- Remove the antenna coax and connect your test patch cable.
- Connect the other end of the patch cable to your PWR/SWR meter.
- Connect your dummy load to the PWR/SWR meter.
- Set the power range on the meter to a high scale, to prevent overload.
- Set the radio to the band and engage the auto tuner to tune to the 50 ohm dummy load.
- Set your radio to CW, AM or FM.
- Adjust output power to minimum.
- Press (PTT) and adjust output power to (say) five to ten watts.
- Check that the power indication

in the radio and the PWR/SWR meter are similar.

You have now set a benchmark with known output into a 50 ohm load. This is an important step. Do not change any settings on your radio until all tests completed and the faults fixed.

Your second test

Here is where we start to eliminate possible causes of your problems. It is likely that you have some kind of socket or bulkhead fitting where your antenna coax enters the shack. From there you have a patch cable to your radio. We test this next.

- Remove the test patch cable from the radio to the PWR/SWR meter.
- Connect your normal patch cable from the radio to the PWR/SWR meter.
- Press (PTT) and observe the power reading. It should be exactly the same as step 8, above. If not, your patch cable is faulty or not suitable.

Test and fix

First, a continuity check of inner and outer. Then insulation check, inner to outer. Check that the pins on each PL259 plug are correctly soldered and fit firmly in SO239 sockets. Look for markings on the jacket of the cable to ensure that it is a 50 ohm cable. *If you find a fault and fix it, retest steps 1-3 above.*

Your third test

Here is another elimination step. It is very common to have bulkhead fittings that are also lightning arrestors. These are not totally fool proof and can fail due to a hit or moisture. We do need to test this fitting.

Disconnect the coax to the antenna. Using your "now tested OK" patch

cable, DC test the fitting.

Connect the patch cable to the fitting.

Test insulation inner to outer with a high scale setting. If it is also lightning protection, test inner to earth (should be O/C) then test outer to earth (should be S/C or very low resistance).

The easiest way to test continuity of the fitting is to connect your 50 ohm dummy load to the outside of the fitting. Look for 50 ohms inner to outer.

Using two (2) patch cables and the PWR/SWR meter test through to the dummy load on the outside of the fitting.

Power should be the same as when you tested your patch lead.

SWR must be about 1.1:1 or the fitting is faulty to RF.

Before the fourth test - when are we going to test the antenna?

Very soon but since it does not work we need to have a look and see. We have to lower the antenna and in the process, inspect and ensure that:

- On the insulators at each end, there is no possibility of contact between the antenna wire and the supporting wire/ropes.
- If there are any joins in either wire element, they are well crimped or soldered.
- At the centre insulator, there is no possibility of contact between the element wires.
- At the balun or coax connection the element connections are soldered or firmly connected.
- If it is a centre fed dipole it should be a 1:1 balun.
- If it is an OCF dipole, it should be a 4:1 or 6:1 balun.
- Cut away the waterproofing around the coax termination and inspect for water damage. If green or corroded it will need to be cleaned if not replaced.

Your fourth test

Now we are going to carefully test the main antenna coax cable, AND its connectors. First some DC tests, then we can RF test.

With the coax disconnected from the antenna AND wall fitting (or radio), test continuity overall of the inner, then outer. Insulation test inner to outer on highest available scale.

- Connect the 50 ohm dummy load to the antenna end of the main coax. Measure inner to outer from the radio end and you should see close to 50 ohms.
- Reconnect the fitting or radio end of the main coax and you should now have connected in sequence; radio, patch lead, PWR/SWR meter, patch lead, bulkhead/wall fitting, main coax and dummy load.
- Press (PTT) and note power reading, it should be very close to your preset five or ten watts. Check SWR, it should be close to 1.1:1. *Be very wary of seeing no reflected power at all. This could mean that the coax is so lossy that reflected power is unreadable. One more test will prove this.*
- Relocate the PWR/SWR meter from the shack to the antenna end of your main coax but put it where it can be seen. The sequence is now; radio, patch cable bulkhead/wall fitting, main coax, PWR/SWR meter, dummy load.
- Press (PTT) and note power reading, it should be at least 75% of your preset five or ten watts, *much less and I would replace the coax.*
- Check SWR and it should be close to 1.1:1.

If you do replace the main coax, repeat all of steps 1 to 7 above.

We are nearly there. Re-apply the waterproofing to the connection of coax to balun, or at least some temporary tape. (If it now works you will get so busy you will forget to finish it all). Pull your antenna back up into position, taking care not to put ANY stress on the coax cable. We are going to test the SWR on the main band, without the help of the tuner in the radio.

The Final Test

Initially we are going to test without the tuner engaged, so we can see how close the antenna is on the main band that it was designed for. It is only on this band that we can make any adjustments to the length of the wire elements. Before we start adjusting we need to know which direction to go, so we will test high middle and low on the band.

Remember that we are now going to be testing "On Air" so we need

to consider others and ask if the frequency is in use.

- Connect the PWR/SWR meter between the radio and the wall fitting.
- Assuming that the main band is 40 metres, tune the radio to, say, 7250 kHz and find a quiet spot.
- Check/ask if the frequency is in use, if not announce 'VK2xxx' testing.
- Set carrier power to minimum.
- Set SWR meter calibrate to near maximum and increase power to "JUST ENOUGH" to be able to fully calibrate. Set to Rev/Ref power and note (write down) the reading.
- Tune the radio to, say, 7100 kHz and find a quiet spot.
- Check/ask if the frequency is in use, if not announce 'VK2xxx' testing.
- Set carrier power to minimum.
- Set SWR meter calibrate to near maximum and increase power to "JUST ENOUGH" to be able to fully calibrate. Set to Rev/Ref power and note (write down) the reading.
- Tune the radio to, say, 7040 kHz and find a quiet spot.
- Check/ask if the frequency is in use, if not announce VK2xxx testing.
- Set carrier power to minimum.
- Set SWR meter calibrate to near maximum and increase power to "JUST ENOUGH" to be able to fully calibrate. Set to Rev/Ref power and note (write down) the reading.
- Compare the three SWR readings and decide if the antenna is long or short, or if no adjustment is required. Note that if all SWR readings are better than 1.5:1, very little will be gained by adjusting the length.

It is now time to let the radio and auto tuner do their thing.

Take the PWR/SWR meter out of circuit as the auto tuner will now be adjusting to something other than 50 ohms. Engage the auto tuner and let it set up on a nominal SSB frequency. Set output power to about 75-80%, then tune around

If the band will cooperate, put out a call and have fun.

or

A 40 metre shunt fed mast antenna

The need

Each day I am on 7.060 MHz (40 metres) to several stations around the east coast of Australia, which may be located variously in southern Queensland, NSW, ACT, Victoria and Tasmania. Conditions in the past eighteen months have made communications from Mildura to both Queensland and Tasmania difficult at times. I had noted vertical antennas often seemed to perform better under trying conditions and had formed this opinion from listening to mobile rigs, and also from my own travels to the Apple Isle.

A lower radiation angle was often a great help and sometimes the difference was marked, now this is not always the case and with my Kenwood TS-2000 I can swap antennas rapidly by just pushing two buttons as the Kenwood has provision for two HF transceive antennas. I normally check conditions on both antennas each day and run with the best, either my vertical or my broadband dipole, and sometimes I even swap antennas between stations.

I set up a test with a temporary vertical and found, at times, there was a great improvement and figured I could modify my 10 metre steel mast to operate as a vertical, and probably cheaply, which further appealed to me.

Research

Firstly I do not believe in re-inventing the wheel so I went looking in different sources for a practical method and below are some of the more interesting I examined:

- A low-band antenna that is almost free (Reference 1).
- The NT6Z antenna system (Reference 2).

- Full-size antennas, a gamma feed system (Reference 3).
- Vertical antennas are effective for 3.5 and 7 MHz work (Reference 4).

Most examples were not what I was looking for, the closest was reference four but it was lacking in detail - as described, 'the tap would have to be found by experiment' and no dimensions for the shunt, and so on. Clearly I would need to experiment to find the solution myself.

Experimentation

The first thing I needed to do was some preparation and I had done most of this with the temporary vertical.

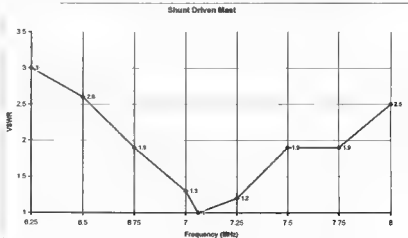
- First, the mast needs to be grounded at the base and I used an 1800 mm (6 foot) copper dropper adjacent to the mast and connected to a common point near the mast bottom.
- Second, I attached four lateral wires 10 metres (33 feet) long to the mast ground point as a counterpoise.
- Thirdly, all coaxial cables running up the outside of the mast need the shields connected to the mast at both the top and the bottom.

- And last, the guy wires need to be insulated from the mast, and you need to break up the length of long guys with insulator(s).

My mast is about 10 metres long and would lend itself well to a 40 metre quarter wave vertical. My first effort at a shunt was poor as the shunt was not long enough and I could not get the VSWR below 8.5 to 1. However I did tune the mast up with my MFJ 989C tuner and have a QSO with the VK3AJK group, and they reported good signals even though feeder losses would have been high.

I lengthened the shunt to four metres and connected the shunt to the mast 560 mm from the top and tested the VSWR again; this was a bit over four to one, and encouraging. I then added some capacitance to the feed by stripping off the covering and shield from 1.3 metres of RG213 coax.

I removed the lower bolt holding the 12 mm aluminium shunt to its support, and connected one end of the coax inner to the UHF connector centre and began feeding the RG213 inner up the shunt. The results were spectacular. As I watched on my MFJ analyzer, VSWR dropped to 1.0 to 1 at 7.060 MHz. There could not have been a better result and the VSWR I



Graph 1: Graph of the SWR curve across the 40 metre band.

plotted is shown in Graph 1.

As can be seen from Graph 1 the antenna is usable over the entire 40 metre band, and using the formula $L = 234/f$ (MHz) the antenna mast computes to 10 metres (33.1 feet) long electrically.

Duplicating my results

Parts Required

- 4 metres 12 mm aluminium or other tube.
- 2 x irrigation risers, 25 x 600 mm (Available from hardware stores).
- 1 x earth rod 1400-1800 mm.
- 5/32" Bolts & Nuts (M4 also suitable).
- 1 x UHF Socket (PL259).
- 1 x Bracket for UHF socket.
- 2 metres of RG213 Coax.
- Wire for radials (40 metres) – scrap is OK.
- Material for brackets - I used hoop iron.

Assembly

- Cut black high density irrigation risers in two and drill a parallel hole at each end 25 mm from each end. I used 5/32" bolts.
- Drill three holes in the four metre shunt tube; for spacing I used one metre between support posts with about 0.5 metre over hang at both the bottom and top. The

bottom support post will not be bolted to the tube as the RG213 inner conductor will need to be fed up through the bottom - so do not drill the bottom hole.

- Screw the three support posts to the tube with bolts and nuts. The whole assembly can then be fitted to the mast temporarily with tie wire, with the bottom of the tube level with the earth connection. See Diagram 1.
- A brace can be made by using cord or plastic tube between any two posts to stop the whole unit sagging. I used 300 lb strain fishing line. Brace can be seen centre of Photo 1.
- Wire or clamp the lower post to the shunt tube. I used a nylon tie. Fit the UHF connector to the bracket and mount to lower support post - position was not critical.
- Strip protective covering and shield from RG213 coax and feed 1.20 metres up the 12 mm tube, from the bottom, and connect the other end to the centre of the UHF connector; this is the capacitive coupling.
- Connect a wire from the shunt to the mast 560 mm (22 inches) from the top of the shunt tube; ensure a good connection to both mast and shunt tube.
- Connect a wire from the ground connection on the mast to the UHF (PL259) socket base.

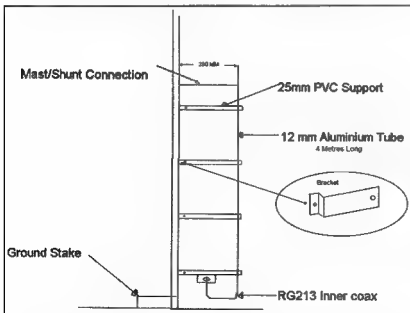


Diagram 1: A diagram of the mast showing work done on the shunt.

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Now more on counterpoise wires. Radial wires are most important as they make a grounded quarter wave vertical antenna work as a half wave antenna; without them performance may be poor. The radial wires, in my case, are on top of the ground as they are in a low traffic area. If need be slots can be cut in the ground with a whipper snipper and the wires pushed into the slots, for example, over lawn.

Testing the antenna

Check assembly and ensure the system is reasonably rigid, and correct if necessary.

Connect an antenna analyzer to the UHF connector and check VSWR; the VSWR should be one to one at the electrical length of the mast; with

a ten metre (approximate.) mast, somewhere around 40 metres. If you have no analyzer you will need to use a power meter and your transmitter. Switch your transmitter to AM mode and test on low power until you find the lowest point of VSWR within the forty metre band; this test should also give you an indication of the mast length.

With no analyzer or power meter you will need to test the antenna with your transmitter VSWR test. Read the appropriate manual for your transmitter. Remember the natural frequency for your mast antenna is related to the mast length and if this falls outside of an amateur band you will not find this as the transmitter will not transmit outside the bands. Your transmitter should give you some indication of the VSWR in the

forty metre band and if the VSWR is abnormally high (for instance 10:1), re-check your installation.

Either way you will need a tuner to touch up the tuning, assuming your mast is about 10 metres long. Once satisfied, and having completed adjustments, make some brackets and secure the shunt posts to the mast. The brackets will depend on your type of mast. My brackets can be seen at the centre right hand side of Photo 1. My shunt assembly is quite rigid. Silicone the shunt tube and all connections to keep water out; do not forget the top hole on the shunt. I left the bottom hole unsealed.

Remember if your mast is less than ten metres and resonating too high in frequency, the mast could be extended cheaply by adding a whip to the top, suitably connected to the mast of course. You can use the formula $L=234/f$ (MHZ) to calculate the amount needed to be added to your mast.

Conclusion

A very good vertical antenna can be made using shunt coupling (gamma match) without coupling coils for the 40 metre band, providing the mast is about 10 metres long.

As said previously the resonant frequency of the system will depend on the length of the mast and the bandwidth will depend on whether other equipment is mounted on the mast; a beam will increase the bandwidth. In practice a tuner will be needed to just touch the antenna tuning up as the operator will probably not be operating right on resonance.

Construction is not difficult, and most of the parts will be found lying around so construction will be cheap. The antenna should achieve a VSWR of 1.0 to 1 on resonance. Good DX

References

www.qsl.net/w9kb/webdoc9.htm
<http://earthsignals.com/n6tz/>
ARRL Handbook 2004, page 20.19
The ARRL Antenna Book 1960, Chapter 8, page 204



Photo 1: A view of the tower, with the brace in the centre of the photo.

National Field Day

Saturday 23 October 2010



The Wireless Institute of Australia

National Field Day

On Saturday 23 October 2010, amateur radio enthusiasts from all over Australia will be showcasing amateur radio in prominent locations throughout their local area.

This activity, new to Australia, will be a good opportunity to break out your field day equipment, demonstrate emergency preparedness, but most importantly engage the public. Most in the general public would give our hobby a second thought, if they knew more about it. This is the opportunity to showcase our capabilities.

Has your club got the capacity to run your station on solar or wind power for the day? Can you borrow some space in the local shopping centre car park? Does the local sports complex run hot on Saturday? Does the date align with a local community festival or school fete? The opportunities are endless. Are you up to the challenge?

The Foundation licence and a revamped WIA have done much to bolster our numbers, but it is time that we make a concerted effort to better publicise amateur radio and all of its benefits. This is your club's opportunity to recruit not only new applicants for your training courses, but also some new club members.

We need to re-introduce the general public to amateur radio, let them know a little of what it is about, without scaring them with too much technical jargon. Our public face will be on display, as well as our professionalism. The common appearance of Club, WIA or special National Field Day branded clothing all helps with the presentation. Excellent operating procedures and tolerance will be on display.

The event is not intended to be a traditional contest, with isolated groups of operators sitting on remote hilltops. We wish to generate as much positive public exposure (and traffic on the bands) as possible. Local repeaters can play an important part in keeping something happening.

The safety of the operators and general public must be high on our priority list during station set-up, operation and close down. Cabling bird's nests should be well hidden, electrical safety must be beyond question.

Remember your audience, for young people, sound and visual activity is important. IRLP, EchoLink, Slow Scan TV, ATV, colour and movement will appeal to the younger audience. HF may be interesting, but the noise should not dominate the activity. Radio direction finding is very popular, if you have the room to safely run it. Get people involved without being intimidating.

Over the next 10 years, most of the Baby Boomers will officially retire. They will be looking for new hobbies and challenging activities to keep their minds active. Add the following generation, Gen Xs who are now facing empty nests with a few spare dollars and a spare room at home. What an opportunity for amateur radio.

Whilst our WIA Centenary Year will be interesting for some and may provide some initial attraction, our display should equally show the future. Are you up to the challenge?

Frequencies

Recommended Calling Frequencies will be advised and will be in accordance with current WIA Band plans.

Modes

Clubs are invited to demonstrate technologies including SSB, Morse code, various digital techniques (D-STAR, SSTV, RTTY, PSK31 and WinLink), IRLP, APRS EchoLink and even amateur radio satellite.

Please email your enquiries or expression of interest to nfd@wia.org.au

73 de Paul VK5PH, Fred VK3DAC, Gerard VK5ZQ.

National Field Day Background

In America, each year during the fourth weekend of June over thirty thousand amateur radio operators participate in an American Radio Relay League run Field Day that has grown to be their largest on-the-air event. This public demonstration of their abilities combines promotion, education, skills enhancement and emergency preparedness practice.

So important is this weekend that it plays a major part of a recruitment program where over 30,000 new amateurs join the hobby each year. Given the population ratio of the USA to Australia we should attempt to introduce 2,000 new amateur radio operators to the hobby per year and days like this will help to achieve this goal.

Setting up in these public venues gives added public relations value – their friends and neighbours can see and experience the fun and public service capability that their "amateur radio" neighbours bring to the community.

The Field Day is part educational event, part operating event, part public relations event – and ALL about FUN! Are you up to the Challenge?

A budget antenna tuner and SWR meter

Rod Russell-Brown VK1ACE

Being of the 'thrifty' school of radio operators, I hate to part with hard-earned cash to pay for commercial gear that I can build myself. I needed an antenna tuner unit (ATU) and so the way forward was obvious – build it!

This is an ATU that will be of interest particularly to our Foundation licence members. An ATU is a device that will match complex impedances in antenna systems to a regular non-reactive 50 Ω load for connection to your transceiver. It is relatively easy to build and will match a wide range of antennas.

My motivation for building this project was so I could have a portable, but versatile unit to use in holiday situations. A rented holiday

home or camping site has meant slinging up a random length of wire into a tree to get on air. Needless to say, the odds of a neat match to my transceiver have been zero. The ATU solves that problem.

The unit described is a standard T match for unbalanced antenna systems. It is a straightforward design and further details can be found in the ARRL Handbook. I have included a few refinements such as a dummy load, SWR bridge and switchable input and output circuits.

The design can be adapted to your own preferences. I found the SWR bridge, in particular, to be very helpful as it limited the amount of gear to carry when going portable.

The Circuit

See Figure 1: The T-match antenna tuner, below.

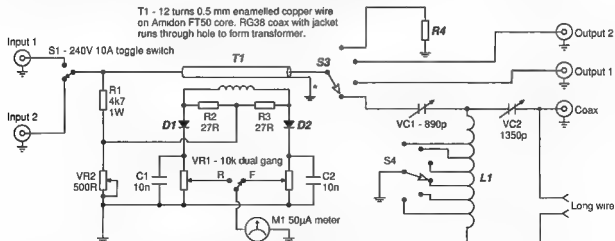
You will notice that the inductor to earth is not a roller inductor. These are fine if you can get hold of them but they are expensive to purchase

new. Personally, I prefer a switched arrangement as shown, for the reason that it is much faster to change the band of operation. It is true that a roller inductor gives a wider range of inductance than a switch but, in practice, a well-chosen switched arrangement will give plenty of flexibility with various antennas.

The SWR bridge is not the 'Monimatch' style popular in inexpensive CB SWR meters. These have the annoying habit of being frequency dependent, very sensitive at higher frequencies and require more power to drive them at lower frequencies.

The bridge used here is sensitive for QRP work and is not frequency dependent. That means it can be used for power measurements if desired. The circuit featured is courtesy of Drew Diamond VK3XU and can be found in one of his excellent construction books (1). I found this circuit easy to replicate. (Photo 1: The SWR bridge)

T1 - 12 turns 0.5 mm enamelled copper wire on Amidon FT50 core. RG38 coax with jacket runs through hole to form transformer.



D1, D2 - Germanium diodes, matched pair OA90, 91, 95.

L1 - 45 turns on 50 mm diameter former over 105 mm. Tap every 2 turns from non-earth end.

R4 - 44 x 2k2 1W carbon resistors in parallel.

S3 - Ceramic rotary switch.

* - Ground one end only.

Figure 1

Figure 1: The T-match antenna tuner

© WEA AR06070_1 Drawn by VK3BFI

A dummy load was added for convenience when travelling. The dummy load simply consists of 44 identical 2.2 k resistors in parallel, sandwiched between two pieces of printed circuit board.

Switching for input and output circuits gives greater flexibility to the circuit but can be eliminated if not required.

Construction

The variable capacitors were scrounged from old valve radios and the values shown are for the ones I used (gangs wired in parallel). I have had no problems with arc-over on the air-spaced capacitors I used. If you do, just reduce your power output.

The variable capacitor values are non-critical and any dual or triple gang variables of around 800 pF total should do the trick. Parallel the gangs to give you a higher capacitance. In this circuit you will need to insulate variable capacitors from the chassis.

I did this by first mounting the two capacitors on a piece of scrap Perspex ensuring that the screws securing the capacitors were counter sunk so that they could not touch the metal chassis. The Perspex unit containing the capacitors can then be bolted in place.

As I wanted to run this unit at up to 100 watts, I needed to insulate the spindles of the capacitors. The shafts of the old broadcast radio capacitors I used were 9.5 mm (3/8 inch) and I wanted to use a standard 6.3 mm (1/4 inch) shaft to enable ordinary knobs to be used.

I joined them using PVC tubing as shown in Photo 2. Note that the extension spindle needed to be packed out with a scrap of PVC tube at one end. Both ends were then secured

in place using 8-12 mm hose-clamps. No twisting in the PVC tubing was evident.

I used a bush arrangement on the front panel to ensure smooth operation of the capacitors. The bush was fabricated from a discarded potentiometer. If you only plan on QRP operation (5 watts or less), the size of components can be reduced



Photo 2: Spindle arrangement

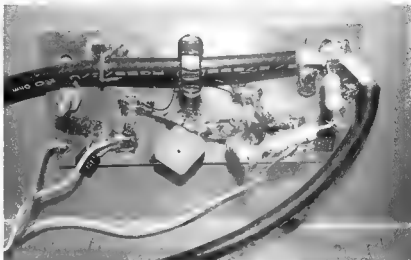


Photo 1: The SWR bridge

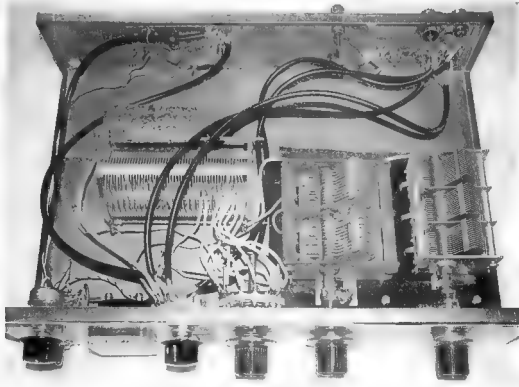


Photo 3: Inside the box

drastically. An inductor wound on a T-68 2 toroid and two cheap plastic variable capacitors could be used with good results.

The dummy load, as mentioned, consists of 44, 2.2 k, one watt carbon resistors wired in parallel resulting in a 50 Ω load

Do not be tempted to use the 5 watt wire wound resistors as they will cause problems due to their internal inductance.

Take two pieces of single-sided, plain printed circuit board (PCB) 100 mm by 40 mm and draw up four evenly spaced columns along their length (about 10 mm apart). Place the two pieces of PCB face to face copper side out. Clamp them in place and drill through both pieces of board 44 evenly spaced holes (8 mm apart between resistors). Then, place the resistors into the holes of one piece of board (copper side out) and solder the resistors in place. Carefully manoeuvre the remaining resistor legs into your second piece of printed circuit board. This can be a bit tricky with 44 resistors on the one board but be patient and you will find you will get all the tails through. Solder the other side and then test with a multi-meter - it should read 50 Ω . I have used this dummy load at 100 watts without incident but naturally it is only rated at 44 watts. Just keep higher-power testing to short bursts.

I managed to put this together with bits from my junk box. If your junk box is limited, get on the phone to some local amateurs and you may be

surprised at what you can scrounge or purchase cheaply.

I happened to have an old 44 μ H inductor that worked well but had more inductance than was required for 80 m - 10 m operation. An inductor of about 28 μ H will be adequate. If you do not have one you can wind your own but that is beyond the scope of this article. See the reference at the end of the article for details on how to wind one yourself (2).

Create an inductor of about 28 turns, 50 mm diameter, 55 mm length, and then solder on the connections about every two turns from the NON-earthly end. You will need to experiment with the exact placement of the taps depending on the value of your capacitors. The ceramic rotary switch can be purchased or again scrounged from friends.

The SWR bridge PCB was etched using an engraving tool. Alternatively, you can use 'Ugly-Method' (soldering components directly onto a plain piece of PCB). Another favourite way is to draw a pattern directly onto a plain piece of PCB with a Dalo pen and then etch it with Ferric Chloride (or Ammonium Persulphate).

What about the actual SWR meter itself? If you have a meter from a defunct SWR meter or ATU you can use that as is. If you cannot source a calibrated meter, then you can re-calibrate a new meter. How do you calibrate the meter? That will probably be the trickiest part of the project. If you only plan on making

from a friend, place the two meters in series into a dummy load and use the meter you borrowed to calibrate the new one. I make no claims of amazing accuracy but it will be within the ballpark for amateur use. I did not bother to use switched power arrangements on the front panel of the prototype.

If you want a more professional looking meter movement as per Photo 4 then you can create a new scale on any meter, as follows. The process is a little tedious but I felt worth the effort.

First, ensure the SWR section of the tuner is working properly by using another meter in series with your new meter. Then, take a series of measurements on the new meter at every ten watts or so and carefully record the displayed current on your new meter for later reference.

Next, remove the clear viewing panel from the meter you wish to modify, then unscrew the metal plate that has the scale printed on it. Be careful not to bend the needle or get any rubbish into the meter movement. Remember the movement has a magnet in it that loves to attract metal filings!

Once removed, take the meter scale plate and scan it onto a computer. Once scanned, take the image and create a new scale with a drawing program. You will use the measurements that you took before disassembling the meter.

Print the new scale and glue it onto the meter face being careful to position it correctly. Now reassemble the meter and install it in the tuner.

Calibration

The SWR bridge needs to be 'nulled'. This is done by switching the antenna output to the dummy load position (having first established that it is 50 Ω). Adjust the 500 Ω trim pot to about mid travel

Then apply a couple of watts of CW at about 14 MHz into the bridge. Start with zero carrier then increase input power until you get a deflection on the SWR meter. Move the Forward/Reverse switch to the opposite position. One position will read high and the other low. Switch to the position that has the highest reading and increase sensitivity control (the

comparative
measurements,
you do not need
to calibrate it;
simply adjust the
tuner for a null
in the 'Reverse'
position. With
the meter half
way up the scale,
you are at about
a 3 to 1 SWR.

If you want to
calibrate your
meter for PEP
power readings,
the simplest way
is to borrow a
power meter

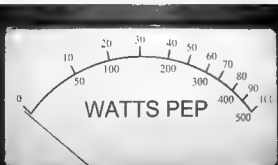


Photo 4: A re-scaled meter

dual gang pot) until you have a full-scale reading.

Then switch back to the other position and adjust the 500 Ω trim pot for a null reading. If it does not null, check your wiring. Make sure that you have only earthed one side of the coax braid.

A Simpler Alternative

According to the books, the T circuit (CLC) can match a very wide range of antenna impedances. If you only want to match long wires, another alternative is to use an L match (LC). While it is apparently not as versatile as the T match, it has the advantage that it only requires L and C, that is, one less capacitor and you do not need to insulate the capacitor from the chassis. I have regularly used the L match with a length of wire around 40 metres and it works very well so you can take your pick of the circuit you use. See Figure 2: The simpler L-match tuner for long wire antennas

Operation

Tune the unit for maximum noise by adjusting the inductor and the two capacitors. A little experimentation will be needed depending on the type of antenna you are using.

Once you have a 'rough match' by ear, fire up your rig to CW with one or two watts and adjust the three controls until you get a match. I was able to use the unit to match a long wire on 80 m-10 m with ease.

So there you have it! If you do not have an ATU, why do not you give this circuit a try? You will find it easy to build and straightforward to operate. You can tailor it to your own needs and be able to boast that you built it yourself!

References

1 Drew Diamond, Radio Projects for the Amateur, Volume 2, Published by Drew Diamond, 2001, page 93 This is an excellent resource and is available from the WIA.

2 Ibid, page 49.

Parts List

VR1	1	10 k dual gang linear
C1, C2	2	10 nF mono or ceramic
T1	1	12 turns, 0.5 mm enamelled copper wire
VC1	1	890 pF air-spaced variable capacitor
VC2	1	1350 pF air-spaced variable capacitor
R2, R3	2	27 ohm
R1	1	4k7 ohm 1 W
L1	1	44 μ H used but 28 μ H is suitable
R4	1	50 ohm which consists of 44 x 22 k, 1 W carbon resistors
VR2	1	500 ohm linear
M1	1	50 μ A meter
S3, S4	2	Ceramic rotary switch with suitable switch positions
D1, D2	2	Germanium OA91 or similar
Sockets 1-5	5	SO239
Sockets 6-7 for long wire	2	Binding posts
S1, S2	2	SPDT 240 V 10 A

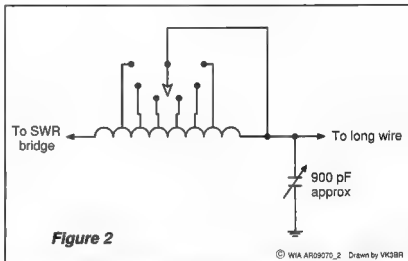


Figure 2: The simpler L-match tuner for long wire antennas

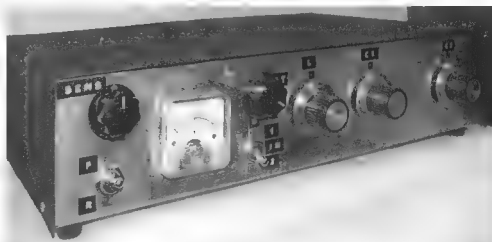


Photo 5: The completed unit



Radioactive

Scout Amateur Radio Award



The RadioActive amateur radio award - for Australian scouts

Bob Bristow VK6POP

JOTA-JOTI Coordinator, Scouts Australia

I have been involved for a few years now in encouraging Scouts to look at amateur radio and to gain a Foundation Licence in order to experience the hobby in more depth.

The reality is that young people whose parents are not into amateur radio tend not to get on air much if at all for a variety of reasons.

To help address this, I developed, with the help of a few people around the country, the RadioActive Award.

The RadioActive Award will operate for the entire month of July 2010, and is open to Australian Scouts (youth members) and Leaders who hold an amateur radio licence.

This award provides an opportunity for Scouts with an amateur radio licence to practice and develop their on-air skills, and to get to know other radio scouts and develop networks.

The award will be presented to Scouts who can demonstrate, by providing logs, that they have contacted a good number of Scouts in several Australian callsign areas (States/Territories).

The award, a certificate, is in three levels – Gold, Silver and Bronze, according to the scores achieved.

The weekend of 9-11 July will be set aside for a QSO-athon where Scouts are encouraged to operate for all or a good part of the weekend.

The QSO-athon makes it possible to increase the score. The longer

someone is on air, the more points can be earned.

All voice modes can be used, including EchoLink (both through radio and computer) and IRLP. Any band allowable by the operator's licence can be used; however it is advisable as much as possible to operate on the bands that Foundation Licence holders can use.

Information about how to participate, and of course the rules, can be found at <http://radioactive.scouts.org.au>

The circular image above is the RadioActive circle logo

RadioActive is a WIA Supported Centenary Activity.



Brock Harper VK6FBKH, one of our newest amateurs, tries his 'look' for the RadioActive Award. Brock passed his assessment on 11 April, with the callsign issued early May.



Mason Harper VK6FMAS—, also one of our newest amateurs, tries his 'look' for the RadioActive Award. Mason passed his assessment on 11 April, with the callsign issued early May.

The WIA Centenary Committee Call for Articles



The WIA Centenary Committee wishes to acknowledge receipt of further historical material forwarded by members and others.

Interesting and valuable material is still being received and the committee wishes to thank the following:

- Brian Kirkby, grandson of Edward Hope Kirkby, a significant player in the establishment and first years of Shaws Wireless Works in Sydney. This is a major contribution to our Centenary celebrations.
- Tim VK2ZTM has sent photo copies of newspaper articles

about George Taylor, the man who called the first meeting of experimenters in Sydney.

- Ron VK4EMF forwarded a CD ROM containing scanned information on Marcus Brims XQA, a very early experimenter in Queensland.
- Graham VK2XJ for a copy of The Australian Home Beautiful, Local Receiver magazine article, published in November 1926.
- From Leith VK2EA information about Thomas Wilmot ZZO in 1924 and earlier XCL, including a letter to the local newspaper about his activities.

- Valda VK3DVT has sent an article about the Subiaco Radio Society and Bert Congdon VK6BC, who was secretary of the Society from its inception in May 1923 to May 1948 - 25 years!

Thank you to all who have forwarded cuttings, magazines and other material to the Institute during this year. It will all contribute to preserving the history of our hobby and radio in Australia.

The committee also welcomes articles on the future of amateur radio: the changes foreseen and even predictions for our future.



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Book Review:

Antennas for VHF and above

by Ian Poole G3YWX

Published by RSGB 2008

Peter Freeman VK3PF

In this book, Ian Poole gives an excellent coverage of topics relevant to antennas on the VHF and UHF bands and an overview of antennas for the microwave bands. This new book is strongly based on the early text "VHF/UHF antennas" by the same author.

He commences with an introduction to the basics concepts, from the fundamentals of electromagnetic waves and the concepts of polarisation, moving through the basics of antenna operation, feed impedance, directivity, gain, and radiation angle. He concludes this introduction with a brief outline of considerations of stacking and baying.

Chapter 2 looks at feeders, discussing characteristic impedance, standing waves, velocity factor, feeder loss, types of feeder (including waveguide) and balanced versus unbalanced feeders. He then moves on to briefly consider matching the feeder to the antenna and power dividers. The chapter concludes with an overview of some of the standard coaxial cable specifications, connectors and how to terminate a cable with a connector.

Having set the fundamental background, Poole then moves on to discuss the operation of the dipole antenna and some of its variants. The basic operation of a half wavelength dipole is described, together with a brief outline of how the radiation pattern changes when the dipole is lengthened to be multiples of a half-wave.

The folded dipole is then introduced. The next section discusses the length of a dipole, explaining the effect of the thickness of the antenna wire or tube on the resonant length of

the antenna. The chapter continues with some examples of dipoles for specific frequencies and some dipole derivatives: the crossed dipole (or turnstile) antenna, the horizontally polarised Omni-V dual dipole stack, the Halo and Mini-Halo antennas. The chapter concludes with the description of a phased array of dipoles for the 23 cm band.

The fourth chapter considers the Yagi. The fundamental features and characteristics of the Yagi-Uda array are outlined prior to moving on to feed impedance and a very brief section on stacking.

Three designs are then described: a 3-element Yagi for 6 metres well suited to portable operations and a 5-element design for 70 cm. It is interesting to note that he does not present a design for the 2-metre band in this chapter.

The next chapter continues in a similar vein, outlining the principles of the cubical quad antenna before moving on to describe a 3-element quad for 2 metres and a 2-element design for 6 metres.

Chapter 6 considers vertical antennas, starting from the simple quarter wave vertical. Poole then describes five-eighths wavelength verticals, the collinear antenna, J antennas and a twin band vertical for 2 metres and 70 cm. The chapter concludes with a brief description of a rubber duck antenna and an outline of some considerations for the car mounting of vertical antennas.

The chapter on wideband antennas examines the discone and log periodic arrays. After describing the principles applying to both types of antenna, several amateur band designs are presented in this chapter, all by G3FDW. There is an 8-element



ANTENNAS FOR VHF
by Ian Poole G3YWX
Published by RSGB 2008

design Log Periodic Yagi (LPY) for 70 MHz, which has little application in this country, and a 5-element design for 6 metres. Two designs are presented for 144

MHz – one of 7-elements and a longer 10-element design. The chapter concludes with a multi-band LPY designed to cover 50 to 70 MHz.

Chapter 8 is totally new to this book, compared to the earlier book. It provides an outline of parabolic reflector and horn antennas, both commonly used on the microwave bands. After introducing the parabolic reflector, Poole describes the operation of the Cassegrain feed system and offset-fed reflectors. He then moves on to describe horn antennas, useful both as moderate gain antennas in their own right and as feed horns for parabolic reflectors.

Chapter 9 discusses basic antenna measurements. Standing wave ratio meters, the dip meter and noise bridges are described, as is their practical use.

The final chapter considers practical aspects of using the antenna. Choice of location, antenna height, mounting of antenna systems within roof spaces and chimney mounting are discussed prior to towers and masts, the choice of materials, wind loading, and antenna stacking. The chapter concludes with a consideration of avoiding interference and safety issues.

An area in which one would question the claims made in the book relates to Chapter 5, where Poole claims "What is true is that it [the cubical quad] offers a gain of about 2 dB over a Yagi of a similar length."

And then some further comments. Before his death, LB Cebik W4RNL published a detailed consideration of the performance of quad beams at VHF (In Pursuit of Better VHF Quad Beams A Work in Progress, available on the Cebik web site). The results of Cebik's work raise many questions. He pointed out that larger diameter elements were needed at VHF to achieve close to the expected gain for a quad beam, and that Yagis are generally easier to build, together with many well performing, readily reproducible designs being available. Those considering embarking on construction of a quad beam on VHF must consider finding and reading the Cebik article prior to committing energy and materials to the task.

Overall, this 132 page book provides

a wealth of information regarding antenna systems for the VHF and UHF bands. Whilst some might consider that coverage of some aspects is limited, each chapter has a list of references and further reading. Some of the material presented has previously appeared in other RSCG publications, especially the now out of print VHF/UHF Manual. This book would be a worthy addition to the bookshelf of any amateur beginning to explore the VHF and UHF bands. As well as giving easy to read introductions to each antenna family examined, several designs are presented that should be easy to build at a fraction of the cost of a commercially made equivalent.

The book is available from the WIA Bookshop.

2010 WIA Grants Scheme

Friday 30 July is the closing date for applications for the WIA Club Grants Scheme for 2010.

Full details of the 2010 rules for the scheme can be obtained from the WIA Web site <http://www.wia.org.au/members/affiliation/about/> together with a template setting out the suggested application headings for an executive summary, identifying how the club seeks to meet the objectives of the scheme and guidance regarding supporting documentation.

WIA President Michael Owen said that the Board was pleased with the results of the 2009 scheme and believed that there was overall support from members for a continuation of the grant scheme. In 2009, there were 17 applications and some 10 projects were given financial support from the scheme. The Board has decided to vary the rules from those that applied last year.

The Board directs the Grant Committee to recommend applications which focus on projects and activities (to be conducted before 1 April 2011) to attract new amateur radio operators to the hobby, also projects supporting emergency

communications and preparedness for emergency communications.

The WIA Board has again this year allocated \$6,000 for distribution to qualifying Affiliated Clubs. The object of the scheme is to promote and advance amateur radio, the WIA and its Affiliated Clubs by supporting useful and/or innovative projects undertaken or to be undertaken by Affiliated Clubs.

Affiliated Clubs with a membership including at least 50% WIA members qualify to participate, though the Board has discretion to allow a lesser percentage in special circumstances.

President Michael VK3KI said that the names of the 2010 Grant Committee would be announced shortly. The Committee would recommend to the Board the projects that should be supported and the amount to be allocated to each supported project. "I urge affiliated clubs to participate in this opportunity" Michael said; "however, it is most important that clubs read the rules very carefully".

<http://www.wia.org.au/members/affiliation/about/>

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*MOB LE ONE *TGM
*OUTBACKER *BENELEC
*COMET *RF INDUSTRIES
*SYNCO *HEAR IT
*RF PARTS *CREATE
*MALDOL *NCVZ
ENTERPRISES *RM
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Jammed up at an memorable JMMNFD

VK3XPD team report, JMMNFD – 20/21 March, 2010

Alan Devlin VK3XPD

To say that our 2010 JMMNFD was "eventful" is an understatement indeed!!

Since the JMF is traditionally a "distance based" event, the VK3XPD team of Michael VK3KH, Peter VK3TPR and myself Alan VK3XPD had investigated several higher vantage points in Gippsland to try to achieve greater distances and to significantly better our contest score.

After due consideration and checking with locals, we decided to operate from Mt Tassie, a lovely high hill of circa 600 metres, south of Traralgon, with almost 360 degrees of panoramic views. We arrived at midday on Saturday to beautiful sunny skies and a light breeze. We proceeded to set up our six hour station. Our intent was to operate across three of the three hour windows in order to benefit from the multiple stations over these three periods.

The first thing you notice about Mt Tassie are the multiple large towers erected on the two high points which form the Mt Tassie summit. On the northern most towers, the very high density of RF gear is amazing and the effects of the RF being radiated were to become very evident as we operated later in the day.

We erected our newly acquired gazebo to provide shade. We had learnt this valuable lesson from our VK9NA DXpedition to Norfolk Island. Then progressively we erected our three six metre masts with our six metre, two metre and 70 cm yags and finally the microwave dish for 23 cm through to 10 GHz. All radios and all the transverters were then powered up, the latter to ensure immediate frequency accuracy and stability.

Commencing at around 1530 AEDST, we discovered our first drama. On two metres, we were hearing but we could not be heard... even with the 180 watt, two metre Tokyo Hy-Power PA. After some investigating we found the connecting cable from the FT-817 to the PA was faulty. After replacing

this cable and completing a few quick fire QSOs on these lower bands, it became evident that we had a very high RF noise floor. The intermods were affecting two metres causing severe "de-sense" which was clearly worse in certain directions. The 23 cm, 70 cm and six metre bands were less affected.

The general propagation was rather average, but... we advanced up the spectrum to 2.4 GHz chasing a few microwave QSOs. On 2403.1 MHz we found a mass of WiFi birdies, pops and chirps all over the spectrum. This despite my having fitted a very narrow 3.5 MHz bandpass filter after the VK9NA expedition, where we had encountered similar interference. The "de-sense" was so bad that even trying to work a couple of "local" stations, Ralph VK3WRE and Rod VK3BQJ was very difficult. The receive signals from Rod were being blotted out totally. After a frequency move up the spectrum, we completed a contact, with some difficulty.

This WiFi issue is another good reason why ALL microwavers should consider migrating down to a small two MHz allocation we have at 2300-2302 MHz. We just need consensus and then we ALL re crystal our rigs!

As the daylight hours passed we managed a few longer distance QSOs to VK7, VK2 and western VK3. The log was looking good with a few nice QSOs but then more drama. Our transverters were starting to "FM", indicating low supply volts. Sure enough we found that two of the four 100 AH batteries were unexpectedly low volts after a very short operating time. Fortunately, Michael had brought along a few extras and we were back on air again for another few hours.

Then the Sun set and the wind came up. Even though we "rugged up", it was bitterly cold and it was difficult to maintain our antenna and dish pointing. So, as the Sun had long gone and after several unsuccessful microwave shots, we decided to head for home. We started packing our gear. Ralph VK3WRE and then Ken

VK3FKRK and his daughter dropped by. So as we chatted, we continued packing, albeit not as tidy as originally done prior to leaving home.

At 2130 AEDST, it was time to leave the hill via the access road, a rather weather-beaten, poorly maintained rocky track back down to the Highway. Michael left first while I had a last look around to ensure nothing was left behind. On arrival at the road junction with the bitumen road back to Traralgon we encountered Michael with his hazard lights on. Naturally, I assumed he was waiting for us to travel home in convoy.

We were confronted with Michael's Commodore with not one but two flat tyres on the passenger side. A rock or a washaway had broken the tyre seals and both tyres immediately went flat. With only one spare, we had to call the RACV out for tray transport back to Traralgon. Finally at 2315 AEDST, the Commodore was loaded and we were on our way again. The "not so squeezey" TV advertisement was very appropriate: three in a Toyota Landcruiser Tray cabin was indeed a bit cramped.

We then discussed getting Michael home to Mt Eliza. It was agreed that we go via Cranbourne where Michael had a business vehicle garaged. Arriving at about 0130 AEDST it was a simple case of Michael accessing the vehicle and then driving home.

Another disaster... driving away, Peter VK3TPR and I both saw Michael throwing his hands in the air in disgust. The key had broken off in the lock. Being so late and with no other options available, Peter suggested we head for his QTH where he would lend Michael a car to get home.... but not before we drove via Dandenong Railway station on the off chance there may be a taxi there.

No such luck, so we then drove direct to Peter's QTH in Glen Waverley where we said our "goodnights", and thanks for a lovely day..

I finally arrived home at 0230 AEDST after a memorable JMMNFD 2010.

VOA Greenvale off air: CVC/RA in limbo: winter in Brazil via Antactica?**VOA Greenvale to close**

I have been informed that America's International Broadcasting Board of Governors, which oversees the VOA, Radio Liberty/Radio Free Europe, Radio Marti, Radio Farda and Radio Free Asia, are definitely closing down the senders at Greenvale, North Carolina.

This will probably happen at the end of October, when organisations usually make their seasonal frequency changes. The Greenvale facility will be the last base of senders for the IBB within the continental USA.

I believe contractors will take over the offshore senders, relaying programming from Washington, Prague or Miami.

CVC/RA

I have not had any recent updates on the fate of the former CVC senders in Darwin. One report said one of the senders was to be relocated to another CVC base either in Africa or Chile.

It is also unlikely that RA will indeed broadcast to Africa or the Middle East. The DRM plans are similar to those of Radio New Zealand and be a feeder to rebroadcasting outlets in the South Pacific and Asia.

Conditions

Conditions have also been up and down. On some days propagation is extremely poor but can unexpectedly pick up in several hours, even in 20 minutes. It is increasingly apparent that fewer stations are using shortwave, judging by the gaps in broadcasting allocations. Often the absence of major players can reveal smaller domestic outlets not normally heard. One of these is Hanoi on 9635 with a relay of their domestic First Network in Vietnamese. I have heard the morning gymnastic sessions shortly after signing on at 2150 and again in our local evening hours with talks and music. The external service of Hanoi called the "Voice of Vietnam" can be heard on 9840 or 12040 in English and other languages from 1000 and is never exactly on channel.

Myanmar is also shifting about of late. Several channels in the 49 metre band have been heard but recently they have been shifting about there as well. They seem to have made a silly decision to use 6035, which is occupied by the Yunnan PBS in China and Bhutan, both of whom have been there for quite a while.

I have seen reports that Yunnan, which is easily heard on 6937, just outside 40 metres, will be shifting from there as from 1 May.

In April another major earthquake struck China at Qinghai, pretty close to Tibet. There were several thousand people killed and numerous people were made homeless. A small station there was heard on 6190 and other stations

did shift to allow programs to be heard. Similar to the Szechuan earthquake of 2008, a National Day of Remembrance was held and all networks carried simultaneous programming, even the Firedrake jamming senders.

Poland also came into the spotlight following an air crash in Smolensk, Russia.

The President of Poland, along with many government high-ups were on their way to the commemoration of a massacre at Katyn Woods in 1940. Sadly all aboard were killed and the whole nation was shocked. The Polish external service was pressed into service to relay news and coverage of the funeral services.

Many of the world's leaders were intending to attend but another major natural event in Iceland caused severe disruption to the world air travel routes. Huge clouds of dust spewed forth from a volcano and jet aircraft could not fly the busy Atlantic skyways and even shut down all European airports for six days. The aero channels covering the North Atlantic fell silent because there were very few aircraft airborne.

Winter in Brazil?

It is going to be very interesting observing the midwinter propagation on the lower frequencies around 0200 UTC, which is our local midday. Previously European stations were easily heard coming over Antarctica with the distinctive flutter.

Now, with most of these senders now silent, there should be a window of opportunity to perhaps hear the many Brazilian stations operating on shortwave. Brazil is rarely heard here in Tasmania and even though I obtained my DXCC several decades back, I barely managed to contact this large South American nation

That is all for now. Do not forget you can email me at vk7rh@wia.org.au

or



No, That's an antenna. VOA at Greenvale NC. Photo W4KTL

Keith Bainbridge VK6RK

vk6rk@wia.org.au

Welcome again to VK6 Notes.

A couple of months ago I sought help in finding the collection of CW / telegraph keys belonging to the late Dave Couch VK6WT. I received many leads; mostly they became a dead end, but I finally got the right one! I entered into negotiations with the family and was successful in recovering almost 150 items of telegraph equipment. In that collection there are 138 keys and other items associated with telegraphy, including field handsets and an Aldiss lamp for Morse signalling.

Now begins the long process of restoration to allow them to go on display, along with some 20 other keys so far donated, at the Neil Penfold State Amateur Radio Centre in Whiteman Park.

A prime location has been chosen for the display at the club house and a

cabinet will have been procured by the time this article is in print. It is proposed to display approximately 70 of these keys (well, you can only fit so many into the display cabinet!) and then rotate the display on a six monthly basis.

Once the display is up and running the grandchildren and great-grand children of VK6WT will be invited to a BBQ morning to have a look at them and the club's other facilities. The family also donated an old Yaesu FT-101 and an FT-201, with associated bits and pieces, that Neil VK6NE is putting on display in his Vintage Radio Exhibition upstairs at the Centre. We will then open the display to visitors, who can attend on any Sunday morning or on club meeting nights.

There are also a further 12 keys from the collection on display at the RAAF Museum in Bullcreek, and I hope to visit soon and add them to the

photographic collection. I have taken at least two pictures of every key and eventually these pictures, along with an additional one or two taken after restoration, will be on the new NCRG website: www.info.ncrg

Thanks to all those who took the trouble to contact me and suggest the location of the missing collection, it was most appreciated, and I have a warm fuzzy feeling knowing they did not end up in a skip!

The ABC Collectors program on Friday 23 April showed the magnificent collection of telegraph equipment belonging to Ron McMullen, who, though not an amateur, is passionate about his keys. I recommend you download it if you missed it, and I would love to see his collection housed over here in Perth.

I have not received any input at all so far this month from any other groups



GGREC HAMFEST

Saturday 17th July 2010

Gippsland Gate Radio & Electronics Club Hamfest at our LARGE venue, the CRANBOURNE PUBLIC HALL, located at the corner of Clarendon St. and High St. Melway 133 K4. See our web page at <http://ggrec.org.au/hamfest>



40 tables of new and used Electrical, Electronic and Amateur Radio equipment.

- Everything is under cover.
- Tea and Coffee available during the event.
- A selection of hot & cold food will be available.
- Great Door Prizes will be drawn at approx 1:00pm.
- Doors open to sellers at 8.30am & buyers at 10am.
- Buyers can gain entry for \$6.00.
- Sellers will pay \$20.00 per table, which includes entry.
- Proceeds from the sale will go to Gippsland Gate Radio & Electronics Club's ongoing promotion of Amateur Radio.

Persons wishing to reserve a table position must contact Chris Chapman now on 0429 187 593 or email hamfest@ggrec.org.au

Book early, positions are limited!

in WA, despite many requests, and I feel guilty writing so much about the NCRG but this is all I have. It is not intentional for this column to become 'NCRG Notes' but if information is not sent, I will use what I have available.

April also saw the commissioning of the new 70 cm repeater at Whiteman Park to replace the old VK6RNS that was feeling very sad. A radical new repeater controller was suggested by one of the club's overseas members David G3UFO.

He floated an idea that the new software from G4KX, called 'pc repeater controller' be tried and to back up his suggestions, promptly built the Vellerman Interface, acquiring a pair of Kenwood TK-880 radios and a spare as well, donating an Asus EePC to run the whole thing and a duplexer to finish it off.

Bits and pieces were posted from the UK as they were completed and all arrived one week before David

himself landed in Perth to oversee the commissioning (Well, he and his wife were actually coming over here anyway to visit relatives and friends!).

David set everything up at my QTH and discovered the duplexer was somewhat lacking so James VK6FJA re-aligned a spare the club had and the repeater was on air running seven watts on test. The power was later upped to 45 watts and as I write this, it has been operational for over 10 days. In the next few weeks it will be relocated to Whiteman Park.

The main reason for the repeater is to replace the NCRG matter frequency on 146.425 with better coverage around the northern suburbs. So again by the time this reaches print the club members will have their own repeater for chatting day and night. Obviously this is not an exclusive repeater! Others are welcome to use it and the frequency is 439.925 MHz.

David, who is also VK6DJO, spent a lot of time and effort getting this

together for the club and we thanked him with the Vibroplex Vibrokeyer Morse key that he has been long desiring! I suggest other repeater builders look at this software as it makes expensive repeater controller hardware redundant.

The 2010 Hamfest will soon be upon us. The usual venue at Ashfield has once again been booked for Sunday 1 August. Those of you who want to book places, arrange displays, or whatever, should be contacting the Hamfest Coordinator on the address on the NCRG Website www.info.ncrg

Hopefully we will have the usual excellent turn out and perhaps a special display will be organised along the lines of previous ones such as the Tesla Display, or the Morsecodeans. More details will follow in next month's column.

Finally for this month my usual plea for input to the column. If you don't tell me I cannot inform others! 73.

af



Part of the NCRG key collection.

Geelong Amateur Radio Club The GARC

Tony Collis VK3JGC

New call signs allocated

Two more club members have recently passed the Foundation licence exam: Jarrod Douglas now holds the call VK3FJDD and Chris Murphy the call sign VK3FCPM.

The GARC AGM

President Dallas VK3DJ reflected on the achievements during the previous year; in particular how club members had accepted operational roles in support of the club and followed through with commitment.

The Club's Public Officer, Nick VK3TK took the chair and declared all positions vacant. Nick thanked all the outgoing Office Bearers for their dedication and hard work and made special mention of the achievements under the leadership of Dallas VK3DJ.

Nominations were called for the position of President, Secretary, Treasurer, Public Officer and calls for nominations for the remaining vacant positions. The Office Bearers for 2010/2011 were elected as follows:

President Dallas VK3DJ
Secretary Tony VK3JGC
Treasurer Andre VK3FASW
Public Officer Nick VK3TK
Committee Members Gary VK3FWCR and Kevin VK3FKEV

Geelong Heritage Festival 2010

An Amateur Radio Exhibition and Demonstration was held at Osborne House Geelong to celebrate the Centenary of the City of Geelong Proclamation in 1910.



Setting up the Equipment Saturday Morning.

The other operational roles remain as per last year with the exception of the Training Officer, Owen VK3OWZ who, due to other commitments, had to relinquish his role to Peter VK3KP to be assisted by Peter VK3ZAV, Lou VK3ALB and John VK3ZPO.

Ray Cowling Award

As is the Club's custom, the last order of business at the AGM is to decide who will receive the Ray Cowling award. This award is given to the club member deemed to have contributed the greatest amount to amateur radio and the promotion of the Geelong Amateur Radio Club in the year.

This year the award was presented to Vanessa VK3FJNY



Vanessa VK3FJNY

This was, as last year, a joint effort by both the radio clubs in Geelong, the GRES and the GARC, at the Geelong Regional Museum off Swinburne Street, Geelong.

IRLP Node



Nick VK3TK

Nick VK3TK, in addition to his Public Officer role, has also set up the IRLP node (6572) on 145.475 MHz, albeit on low power and operating in simplex mode. The Tait T500 node transceiver has been stable over the last month but the replacement Motorola M120 is ready to be commissioned.

The new radio will operate on 145.475 MHz. A secondary channel is currently set up for VK3RGL (not VK3RGC): its repeater operations will include 2-hour periods on VK3RGL from approximately 8:00 pm on Wednesday evenings. This will allow final shake-down of IRLP node and repeater configurations. Once VK3RGC site issues are resolved, the IRLP will be switched on permanently.

Members from both clubs operated from 80 m to 10 m and on 2 m and 70 cm. In the latter two cases the major contact throughput was using IRLP facilities into the USA and Canada.



Barry VK3MBW Operating on the HF bands.

Oxley Region ARC

Over the long weekend this month the *Oxley Region ARC* will be conducting their 35th annual Field Day on Saturday 12 and Sunday 13 at the regular venue – the Sea Scout Hall in Buller Street, Port Macquarie. During Saturday there will be a range of fox hunting events and a dinner in the evening at the East Port Bowling Club.

On Sunday the activity will centre at the hall with field events, traders, disposals, displays, BBQ lunch, free tea, coffee and biscuits. The weekend has been given the status of a WIA Centenary event. More details in VK2WI News sessions, the Oxley web site www.orarc.org or P. O. Box 712 Port Macquarie 2444. Weekly nets on VK2RPM 6700 at 0830 Sunday and 1930 Wednesday.

Waverley ARS

This month will be the AGM for the *Waverley ARS* who have their club rooms at Rose Bay in the eastern suburbs of Sydney. Their annual auction will be next month on Saturday 10 July. Besides their Project afternoon on the first Saturday they often have working bees on a Tuesday. You should check via the Paddington repeater 7025 before attending. Their weekly net Monday is on the Paddington repeater 7025 at 2000. Check the web site vk2bv.org or ring Simon VK2UA on 02 9328 7141 for further information.

Hornsby & District ARC

The *Hornsby & District ARC* had their AGM last month. This month Bob VK2ZRM will show his home brew solid state linear for HF. They meet at the Mt Colah Community Centre in Pierre Close, Mt. Colah. They operated VK2IMD for Marconi Day in April, logging some 150 contacts. If you worked them send your QSL card to P. O. Box 362 Hornsby 1630 to receive a special card in return. HADARC regularly conduct assessments. Bookings essential. Visit www.hadarc.org.au Various weekly

nets. Repeaters Monday at 2000, 80 metres Wednesday at 2000 and 40 metres 0900 Friday.

Blue Mountains ARC

The *Blue Mountains ARC* held their AGM last month. They meet on the first Friday evening at the VRA Building, Simeon Rd. Orchard Hills. They will conduct Winterfest towards the end of winter.

Mid South Coast ARC

The *Mid South Coast ARC* held their quarterly meeting in May at the regular venue of the CWA Hall in Wason Street, Milton. The next meeting on Saturday 14 August. Their 6700 repeater now requires a 123 Hz tone for access. There is a weekly net on Wednesday at 1930 on 3617 kHz and at 2030 on their repeater 6700.

Sydney North WICEN

Sydney North WICEN held their AGM last month at the VK2WI site. NSW WICEN is seeking a Publicity Officer; duties include the news report to VK2WI. Next month has a range of activities across VK2, including The Bushwalkers Nav Shield on 3 and 4 July. Eden Creek Horse Enduro 10 and 11 July. Also the Blue Range Rally in the ACT on 10 July. Southern Mountains Rally on 31 July. Details at www.nsw.wicen.org.au or the Duty Operator 0408 397 217.

St. George ARS

St. George ARS in Sydney's south held the annual Bill Shakespeare Memorial Auction last month. Their monthly meeting is the first Wednesday evening at 1st Kyle Scout Hall, Donnelly Park, Kyle Parade, Connells Point. Their weekly net on Thursday at 2000 on VK2RLE 6800 changes to a slow scan TV operation at about 2030. Goulburn and Southern Highlands ARC net Sunday at 2030 on 3615 kHz.

Orange and District ARC

Members of the *Orange and District ARC* have been visiting a local

primary school weekly for an hour of basic radio and electronic talk to the students. They also provide construction projects and so far the students have made a crystal set and a Morse key. Ross VK2ER says there is a lot of interest which could result in some students taking up the hobby. Why not check out your local school to see if there is a similar interest?

Amateur Radio New South Wales

Amateur Radio New South Wales held their AGM on 17 April at the Dural property. The 26 members in attendance quickly got through the business. There were 10 candidates for the nine committee positions. 520 ballots had been sent out and 183 were returned. Those successful (in alphabetical order) were Mark Blackmore VK2XOF, Michael Corbin VK2YC, Brian Kelly VK2WBK, Beth Langley VK2AO, Mathew Magee VK2YAP, Tim Mills VK2ZTM, Norm Partridge VK2TOP, Terry Ryeland VK2UX and Peter Zielinski VK2PJZ. Unsuccessful was Bob Yorston VK2CAN. Peter VK2EMU and Kevin VK2CKD were reappointed as returning officers. A new Auditor has been appointed. The incoming committee is in caretaker role until all members attend a meeting to determine the office bearers.

Aub Topp VK2AXT who was the Librarian while ARNSW was located at Parramatta reluctantly had to retire from the position of both Librarian and Museum Curator. The meeting moved a vote of thanks to Aub and he was presented with a Centenary Plate and Mug. The library arrived from storage in several hundred boxes and is being restored to the shelves over the next few weeks. There will be a call for expressions of interest for those wishing to be the Librarians. The meeting concluded with a general discussion on the role of ARNSW now facilities have again become available. The new building is the "The Centenary Building".

A planning survey was included with the ballot papers to help with

planning ARNSW operations. The results are still being compiled. Work is underway on a new web site for ARNSW. A Trash and Treasure was conducted at the end of last month. The next is Sunday 25 July.

The VK2W1 3699 kHz automatic Morse transmission commenced operation in 1985 as a project of HADARC before its transfer to the Dural site some years ago. The 2 metre Morse transmission commenced in the mid 70s. Currently it is not operational from the Dural site.

The Time Capsule is revealing a lot about what happened during the 75th anniversary. The contents are still being catalogued. One of the items in the capsule was AR magazine for January 1985 with an article about the IREE which is the professional body of Radio and Electronics Engineers. Both the IREE and the WIA can trace their origins back to the 11 March 1910 meeting. In the 1920s and the 1930s there was considerable activity as Radio developed, much of it in VK2. Most of those who made up the WIA in the 1920s were professional people who felt that the WIA was more for the experimenter. They sought to

develop a body more attuned to their needs and in doing so sought to wind up the WIA NSW Division. It appears that the IREE came into existence

on 15 March 1932. Its name was registered in August 1924. The IREE article reports that later in 1932 moves occurred to wind up the WIA. Apparently there were many delays and nothing happened, then finally a meeting convened on 2 June 1937 restored the WIA NSW Division to its former and intended role for the Radio Amateur.

Our Centenary is bringing out information about our past. It is the time when anyone with historic material should make it – or a copy – available to the

Centenary Committee. The more material available the more accurate become the records.
73, Tim VK2ZTM.

“Hey, Old Timer...”

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or Bill VK3BR on 03 9584 9512.

or email to raotc@raotc.org.au for an application form.



South East Radio Group Convention 2010

Saturday 12 and Sunday 13 June, 2010, at the Margaret Street, Mount Gambier scout hall.

Yes this June, on Saturday 12th and Sunday 13th June, 2010 the South East Radio Group is having their annual convention and the **Australian Fox Hunting Championships**.

Doors open to the Margret Street scout hall at 12:00 on Saturday.

The first event of the Fox Hunt championship starts at 11:00 on Saturday.

There is also a home brew contest with great prizes.

New and preloved equipment for sale

Food, hot and cold drinks

Commercial displays

Home brew contest

Lucky door prizes

Come along and see SERG celebrating the WIA Centenary with the callsign VK100WIA.

For more information, or to book a table, contact Wayne VK5ZX on (08)87254335 or 0407 718908.

Or you can see us on the web at

Christopher Comollattie VK4VKR

Email: qtc@wia.org.au

CHARC

Central Highlands AGM. The date for the famous and popular Central Highlands Amateur Radio Club AGM at Camp Fairbairn near Emerald has been announced. CHARC Secretary Gordon VK4KAL has advised that the AGM will be on from 4 pm Friday 17 to midday Sunday 19 September 2010. Find out more by contacting Gordon on vk4kal@wia.org.au

RADAR

Rockhampton and Districts Amateur Radio Club have been busy with the shack project. Jeff VK4NJB, Mike VK4LMB, Ray VK4HOT, Bob VK4HRT and Doug VK4DUG now have it ready for operation. The official open day call sign will be VK4CHV on 25 July 2010. You may hear them operating on the 40 m band or even 6 m if it is open. The IRLP node number is 6973.

FNNQARG

The Far North and North Queensland Amateur Radio Gathering (FNNQARG!) will be happening

AM and CW FOR ANZAC Day

On behalf of the Tablelands Radio Group

For a guy who is still endeavouring to get his merit badge for boiling water when the Tableland Radio Group go on their many radio camping trips and for a guy who thinks you open a can of baked beans by madly yelling Banzai! and smashing it viciously, straight down the centre, with a mean looking machete and then scraping up the remnants for the pan, Mike Patterson VK4MIK has the occasional good idea. Occasionally – just occasionally – they are brilliant.

Such was the case with his AM and CW for ANZAC Day, the concept of which was born after a particularly long session of deep and meaningful think tank sessions for Group activities and a conversation in passing with WW II Coastwatcher, Lionel Veale and his matter of fact discussions about operating his

over 11 to 14 June at Cardwell Village Beachcomber Motel and Tourist Park. It is a yearly gathering of amateurs and support crews from the Cairns, Atherton Tablelands and Townsville Regions plus lots of places in between and far away. FNNQARG will be a friendly, relaxing time with Sunday being the traditional cricket match. The TREC Trivia challenge is a rip snorter fun event too. Come along and catch up with that face you have been speaking to for ages across the ether. It is advisable to ring Reception at the park on 1800 005 633 to book your accommodation as soon as possible, as the long weekend in June is a popular time. A wide mix of accommodation from Motel to Villa to Camping is available.

Ipswich and District Radio Club

Ipswich and District Radio Club has come up with an idea for the WIA Centenary Celebrations. In the form of a special coin (See article on P35) which has the WIA logo on one side

transceiver, an ATR4A, during military operations.

Reminiscing, Mike realised how we have become accustomed to using the SSB, FM and Digital modes as a matter of course, with plenty of power available and ionospheric prediction data until it's coming out of our ears. Life with these modes has generally been good and in most part, reliable. Of course, military forces and commercial agencies now use online or satellite high speed data transfer which has made AM and CW quite obsolete.

Mike realised that this was not always the case, and that there would be many reading this article today who remember the trials and tribulations associated with the passing of radio traffic when AM (amplitude



and Ipswich club on the other. (See article on P35)

Mike VK4QS, the president of the club, is also proud to display his station setup (above). The transmitter is an AWA ATS-1 1 kW, ex OTC Coast Radio Service. The receivers are Collins R290A and the black units are a Collins HF-80 station.

Send in a picture as Mike has done and show us your station equipment.

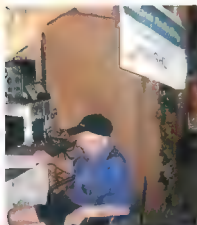
Until next time, 73 Chris VK4VKR

J R (Ross) Anderson VK4AQ

modulation) and CW were the only two modes of communication available to us – either as servicemen and women, commercial radio operators or as amateurs.

AM, using its customary wide band width was far more prone to interference and certainly not in the same league as SSB when it came to distance and clarity of reception. Headphones were almost always needed with AM when it came to the reception of formal traffic by military forces and other instrumentalities charged with the passing of official traffic. Conditions were certainly good when you could receipt for a message in its entirety, first up, without having to get at least one repetition from the transmitting station.

Mike got to thinking about servicemen and women and how their use of CW was the norm, usually under arduous conditions, for many wartime operators. CW was fairly reliable and communication on the low power outputs of the rigs of the day was possible most of the time but always with difficulty. One must remember too, that Ionospheric Prediction Charts were unheard of in those days and operators had to rely



Tom Sowers VK4AOG, 92 years young, operating CW at Mareeba Warbirds on ANZAC Day. Tom went through the war years as an engineer with 460 Squadron, RAAF, at Middle Wallop, UK.



Mike Patterson VK4MIK, the instigator of the AM and CW on ANZAC Day Activity on the left and Nick Watling DF0 OAM VK4YT, the guy who restored the WW II equipment for Mareeba Warbirds on his right.

solely on experience for making long haul contacts. Morse, unfortunately, could not compete with the speed of traffic handling introduced by the newer radio teletype and landline teleprinter networks were established.

With these thoughts flashing through his mind Mike set about seeing if we couldn't pay tribute to servicemen and women communicators who used these modes during periods of hostilities in the last 100 years. His original thoughts were fairly much confined to having national operators and clubs use either AM or CW on their regular nets on ANZAC Day and see how it went.

After considerable personal time, effort and hundreds of emails and telephone calls, Mike had organised a variety of stations and authorities who were keen to become involved in the activity. They included:

- Terry Murphy VK3UP organising HMAS Castlemaine VK3RAN
- Larry Teakle VK5HBG, Whyalla ARC, and HMAS Whyalla
- Colin and Anne Whale with HMAS Diamantina VK4RAN
- Nick Watling VK4YT from Mareeba Warbirds (using the organising group's call VK4GHL).
- The Townsville Amateur Radio Club, operating from their club rooms which just happened to be a World War II command bunker set into Castle Hill.
- The Tableland Radio and Electronics Club VK4WAT, operating from the Rocky Creek war memorial park and the Atherton War Cemetery.
- Maurice Camp, operating his

AS10 Army man pack and Type 3 Mark II Tx/Rx.

- Amateur colleagues in New Zealand were made aware of the activity through NZART HQ.

Brian Kemp VK48B, Michael Owen VK3KI and Ewan McLeod VK4ERM gave Mike all manner of support from the onset and actively encouraged him every step of the way. Through the WIA and Brian in particular, every club and group in Australia was aware of the activity.

It was about this time that the Radio News from Southgate ARC gave a world wide overview of the event and we learnt that Turkish Amateurs were going to be operating from the Canakkale/Dardanelle area where our ANZAC forces fought during WW II. Contact was made and they were also happy to have us involved in an activity that linked into their national event as well. Bill Lochridge VK4WL from the Tablelands Radio Group did manage a PSK contact with the Turkish Group in the lead up to ANZAC Day which was a wonderful QSO for all concerned.

In the final days before ANZAC Day Mike was informed that amateurs from the UK and US also hoped to participate, so what had been a germ of an idea a couple of months prior had certainly grown legs and was gathering quite a momentum.

It is hard to judge just how successful the day eventually turned out to be, given that the activities were generally local and on an ad-hoc basis.

Judging by the contacts made on the Atherton Tablelands and from around the Townsville region, the results could be classed as good. Hopefully, reports from all States in AR – both written and pictorial - will give a fuller account of the success of the day.

The organising body, the Tablelands Radio Group, operating from the aerodrome at Mareeba Warbirds and using restored WW II radio equipment, had a mixed bag of results but were heartened by the overall response they did have. Conditions in the latter part of the afternoon deteriorated quite badly much to the disappointment of many. The equipment used was beautifully and painstakingly restored over many hours by Nick Watling DF0 OAM

VK4YT and Chris Gill VK4YCG and TRG is very thankful for their very generous support together with that of Mareeba Warbirds owner Mr Mike Spaulding

After the event Mike expressed his heartfelt thanks to everyone who had participated in the AM and CW on ANZAC DAY Activity and said he was confident that it would become a regular annual event in the Australian Amateur Radio Calendar in future years.

The use of AM and CW should certainly have kept one thing in everyone's mind on the day!

Lest We Forget



AM and CW on ANZAC Day
An Initiative of the
Tablelands Radio Group (TRG)
Atherton, Queensland, Australia

**Remember our
Diggers**



25 April



TO RADIO	CONFIRMING OUR QSO						
	DAY	MONTH	YEAR	UTC	MHz	RST	MODE



**ANZAC DAY
2010**

*Please QSL to: Mike (Barjo) Patterson
PO Box 170
Yungaburra Qld 4884
Australia*

Ipswich and District Radio Club

Centenary Wireless Institute of Australia 1910 ~ 2010 Commemorative Coin

Mike Charteris VK4QS

On 1, 2 and 3 July 2010 it will be the honour of the Ipswich and District Radio Club to be the first radio club in Queensland to hold and operate under the centenary call sign VK100WIA.

To contribute to the celebrations, we have a special item to commemorate this once in a lifetime event. This is a specially made centenary commemorative coin with a WIA 100 Years logo on one side and the Ipswich and District logo on the other side.

This will be available from the Ipswich and District Radio Club website from July 2010. The cost will be approximately \$10.00 per coin plus postage. There will be a limited number available during the rest of the year of the Centenary celebrations, so do not miss out.

This is not a money making exercise for our Club, but an opportunity to remember your personal involvement in the WIA Centenary Celebrations for many years to come.

On Thursday 1, Friday 2 and Saturday 3 July, the days allocated for our Club to use the VK100WIA call, we will be operating 24 hours a day for the maximum coverage of HF and other bands. We will have BBQs during the course of operations. All stations making contact with our Club can if they choose purchase one or as many as they wish of the Commemorative Coins. The commemorative coin will be available for sale through our website. So not only you

receive the commemorative QSL card, but also the chance to purchase something very special indeed to celebrate the Centenary of the WIA.

Should the short wave radio community confirm our transmissions, it would be a nice collectable for their station as well.

If your club would like to undertake something of a similar, if not the same concept, the details of the coin manufacturer are provided. To do something similar creates the momentum for other amateurs and short wave radio listeners to get involved in this celebration.

It would be great to be able to collect one of these commemorative coins from every club in Australia, or those that decided to go with the coin idea.

The details of where to get your own Club's Centenary of the WIA coin underway is as follows:

Contact Paul at wundurra1@bigpond.com.au (mention Ipswich radio Club and our article in AR Magazine)
Or go to his website at www.wunduramedalmounting.com.au

Or contact Mike
ipswichdistrictradioclub@webnode.com.au

So good luck to you one and all, we look forward to working you during the time we have the honour of using VK100WIA for the WIA Centenary Celebrations.

Cheers, Mike VK4QS.

A



D



Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY

The April meeting was a member's Buy and Sell and generated its usual interest and exchange of goods and money

As has become usual, at the end of the meeting we have a mini-auction of some items from the deceased estates we have been handling. The larger, more expensive items are dealt

with by tender. A list of the items is sent out to members. They have the opportunity to put a price on the things they want and the item goes to the highest bidder, as long as the offer is realistic.

We are fortunate to have a couple of people prepared to spend the time to organise these tenders and to run the auction. We are also lucky to have somewhere to store the equipment so we can remove it en masse for the widow.

This is an unfortunate part of any hobby but one we are happy to manage it as a service for our members.

Congratulations to our youngest member Patrick VK5FMPJ, who has been racking up good scores in recent VK contests.

The regular meetings of AHARS are held in the Belair Community Hall at 7.30 pm on the third Thursday of each month

Doug Tamblyn VK5GA life member RRC

Andrew Williss VK5LA

At a recent meeting of the Riverland Radio Club, Doug Tamblyn VK5GA was made a life member, and presented with a life membership plaque in recognition for his tireless work as secretary, since the formation of the club, at its inaugural meeting, on 21 May 1989, at the home of John Ruston, ex VK5ARK.

Doug was first licensed in November 1981 as VK5PDT upgrading to VK5GA in March 1992.

Over the years Doug has been active on HF, enjoying many contacts worldwide, including SSTV.

He particularly enjoys the six metre band, having recently made some nice contacts into Asia, using 10 watts from his

Kenwood TS-680 and Yagi.

The Riverland Radio Club membership felt Doug was a worthy recipient of the award and enjoyed presenting the plaque to Doug as a gesture of their appreciation for his commitment to the smooth running of the club.

Doug has recently celebrated his 80th birthday, and is still an active member of the club. He is also regularly heard on the air, keeping skeds with his local, interstate and overseas (propagation permitting) Ham Radio friends.



Doug VK5GA
Ham Radio friends.

OTY

DOUG VK5GA

I am delighted that the Riverland Radio Club has recognised the achievements of their Secretary and Treasurer, Doug VK5GA: he has earned the accolade by the Club - awarded Life Membership. I would like to add my congratulations.

I have been to Australia six times and visited several radio clubs mainly in SA (my brother lives in Adelaide). The hospitality I have received from all of the clubs is a credit to the radio amateurs of Australia

Each club has one or two members who can be recognised as the driving force that keeps the club going year after year. I do not think the Riverland members will mind me saying that

Doug is the driving force behind their club. He has been the Secretary and Treasurer for most of the time since the club was founded (1989) and has guided it through the many changes over the last few years.

The first time we met was to discuss and compare the new licence and examination regulations in Australia and the UK during which it became evident that amateur radio in the Riverland would struggle to exist without the catalyst of a club to provide instruction and examination facilities.

I live in Cumbria which is remote by UK standards so comparison with the Riverland is appropriate. In this part of Cumbria we have two clubs Workington ARC and Furness ARS both of which run courses for Foundation, Intermediate and Full licences. Without these clubs

amateur radio in the area would cease to exist. It is through dedication and hard work over 20+ years by Doug that amateur radio continues in the Riverland area of SA.

The founding and running of the Riverland Club is only part of the reason Doug's achievement should be recognised it is Doug the individual, the dedicated amateur, the friendly host to visitors, the helpful "Elmer" and much more that the club members recognise.

Again, a nicer guy you will never meet and I would like to record my support of the Riverland ARC decision to show their appreciation for Doug's dedication

Regards

Norm(an) G7MR1, also M0CRM and former VK5ATJ.

Reporting for duty

This month I present a series of reports on various satellites in orbit and on the ground.

AO-7 solar panel report

During March 2009 AO-7's 70 cm beacon came to life sending RTTY telemetry. As reported in the April 2009 issue of AR, the telemetry was within specifications and showed AO-7 as being in good shape.

James A. DeYoung N8OQ collated telemetry collected from amateurs worldwide (notably Alan ZL2BX) and used this to determine how AO-7's solar panels had deteriorated over the past 35 years. James gave a presentation during the 2009 AMSAT-NA symposium but only a brief summary is contained in the proceedings.

The full article was published in the January/February 2010 issue of the AMSAT journal. He describes the solar panels, AO-7's orbit and its environment, the predicted degradation of the solar panels and how well the telemetry values confer with the predictions. AO-7's solar panels were donated by NASA as spares from their Orbiting Geophysical Observatory series during the 1960s. The high quality of design and construction has contributed to their longevity.

The solar cells degrade due to radiation exposure and AO-7 orbits at the lower edge of the inner Van Allen radiation belt. The solar panels are covered with a 0.15mm sheet of glass coated to reflect red light and protect against collisions with dust and debris. James suggests that over the years this glass has discoloured, contributing to the lower power output.

In summary, AO-7's solar panels have degraded less than predicted. Overall the maximum power output has dropped 33% from 4.6 Watts per facet at launch to 3.05 Watts (AO-7 has 8

facets, of which 3 or 4 are illuminated at any time). The predicted current output was 533 mA but the telemetry gave an average of 562 mA, 11% higher. James suggests that AO-7's panels will provide enough power for many years to come.

In 2018 the predicted power output will be 36% less than at launch. The good news is that during the next five years AO-7 will be spending most of the time in full sunlight with short eclipse periods. This month the eclipse period will be about 3 weeks long. The next period of lowest sunlight levels will be around 2018.

VO-52 report

Mani VUZWMY of the ISRO Satellite Centre in Bangalore emailed via the AMSAT mailing list to all users of HAMSAT VO-52 for their opinions on the satellite.

The HAMSAT project team are compiling a "Comprehensive Performance & Utilization Report" and would like user's comments. They would especially welcome comparisons between HAMSAT and other linear satellites (AO-7, FO-29 etc.). HAMSAT celebrated five years in orbit on 4th May 2010. It has been fully operational during this time giving excellent service.

I did a tally of contacts made over the past five years. VO-52 has been my most used linear transponder. This is not surprising as AO-7 is not as easy to use and FO-29 has had eclipse troubles recently. You can email Mani at wmy@isac.gov.in.

SO-67 progress

By the time you read this, SO-67 may be back in use for amateur radio operators. SA-AMSAT reported on their website that during the past six months SumbandilaSat has been successful in achieving its primary imaging mission. Despite losing the use of two reaction wheels and one

of the imager control boards they are still able to take images. One image of Dubai's man made islands is on the SA-AMSAT website. The reaction wheels loss means SumbandilaSat now tumbles 'head-over-heels' and different techniques must be used to compensate when taking images.

The damaged imager control board handled the green, xantrophy (yellow light reflected by foliage) and blue spectral bands. Now images can only be taken using red, red-edge and infra-red light. The vibrating string, communication and VLF experiments are continuing.

SA-AMSAT also announced that they will build a cubesat. The proposed payload is a transponder with a 30 kHz bandwidth, telemetry beacon and science projects. Nothing is finalised so we have to see what the South African amateurs come up with.

The full report and news of the SO-67 transponder use can be seen at the SA-AMSAT website at www.amsatsa.org.za and other photos at <http://sumbandilamission.blogspot.com/>

Cubesat workshop

California Polytechnic University held their annual cubesat workshop during 21st to 23rd April. The workshop was primarily for the builders of cubesats and covered a wide range of subjects.

Many videos of presentations were posted on the internet. After viewing most of the available presentations I noted these trends. Cubesats are being taken seriously by industry, government and even the military. They will not be just for universities and amateurs

There are high performance cubesats being developed. Just think of how much processing power and other technology is found in a modern mobile phone, then apply that to a small satellite.

On the radio side the trend is for

higher frequencies and larger ground station antennas to maximise the amount of data from the satellite. The cubesats will need to accurately control where they point their antennas using reaction wheels. There will be cubesats with thrusters (single and multiple) for manoeuvring and changing orbit. More cubesats will have deployable solar panels to increase the power available.

The missions will move from experiments and testing hardware to proper long term managed operations. The payloads will become more flexible in the number of operations they can do or there will be multiple payloads on the one satellite.

Different proposed missions were presented including QB50 (where 50 cubesats will be launched from the one rocket to study Earth's upper atmosphere) and a lunar orbiter/lander (with Mars a theoretical possibility).

The videos can be seen at <http://www.ustream.tv/channel/CubeSatWorkshop/v3>. The lunar project is at www.cubesatlab.org

All this and more in just one to three 10 cm cubes.

Flat-sats

Two amateur satellites currently under construction have made it to the 'flat-sat' stage with photos and videos on the Internet.

A flat-sat is where the various sections of the satellite are laid out on a workbench with easy access for testing. They have photos of a series of modules interconnected together with power supplies, oscilloscopes, spectrum analysers and laptops hanging off of them.

The KiwiSAT website shows their flat-sat setup as at the end of 2009. Most of the flight hardware has been proven except for the main computer (IHU). The hardware problems have been sorted but much work needs to be done with the software. Photos and descriptions of each module can be found at <http://www.kiwisat.org/status.html>.

The AMSAT-UK FunCube project team had a meeting during 10/11 April. While the full set of PCBs and modules weren't available, some of

the satellite's hardware was tested. The command, control and telemetry board, the electronic power supply board and a 10.7 MHz IF board were tested together

With an external 10.7 to 145 MHz upconverter they were able to get the satellite to send telemetry, receive it at 145 MHz and decode the telemetry to a laptop

Software and hardware problems were identified for further work. Photos and videos are available at http://funcube.org.uk/WP3/?page_id=91 '12C' refers to the method used to send data between parts of the satellite.

Final Pass

Cubesats have come a long way since the launch of CO-55 and CO-57 in 2003. Their future looks bright with interesting missions in the near future.

It's good to see that KiwiSAT is nearing completion and will soon be starting the launch campaign. Next month's issue will have the latest six-monthly review of operational OSCARs.



AMSAT-VK

AMSAT Co-ordinator

Paul Paradigm VK2TXX

email coordinator@amsat-vk.org

Group Moderator

Judy Willams VK2TJU

email secretary@amsat-vk.org

Website

www.amsat-vk.org

Group site:

group.amsat-vk.org

About AMSAT-VK

AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial Amateur Radio satellites. Many of our members also have an interest in other space based communications,

including listening to and communicating with the International Space Station, Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft.

AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly net Australian National Satellite net

The net takes place on the second Tuesday of each month at 8.30 pm eastern time, that is 0930 Z or 1030 Z depending on daylight saving. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales

VK2RMP Maddens Plains repeater on 146.850 MHz

VK2RIS Saddleback repeater on 146.975 MHz

VK2RBT Mt Boyne Repeater on 146.675 MHz

In Victoria

VK3RBT, Laverton, Melbourne, 438.600 MHz FM, 91.5 KHz CTCSS tone access

In South Australia

VK3TRM, Laddon on 147.125 MHz

VK3RSC, Mt Terrible on 439.825 MHz IRLP node 6278, Echolink node 399996

In Tasmania

VK3OTV Cawler 6 m. Repeater 53.775 MHz IRLP node 6134

VK3OTV Cawler 2 m. Repeater 146.775 MHz IRLP node 6616

In the Northern Territory

VK3MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT-NA or VK3JED conferences. The net is also available via IRLP reflector number 9558. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email. Frequencies and nodes can change without much notice. Details are put on the AMSAT-VK group site.

Become involved

Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm. These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night.

Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

Turning a new leaf

This is my first column as Publicity Officer. While I am flattered that people have faith in my ability to carry out the job efficiently, I suspect I may have been selected by a few friends while my back was turned briefly. So I can only do my best and look forward to receiving news from all of you so we can continue to provide an interesting and informative column.

Since obtaining my amateur radio licence in 2007, I have had the opportunity to meet many engaging and enthusiastic women operators through ALARA. There are many opportunities to connect up with like-minded people via the weekly ALARA broadcast on a Monday night, through the regular luncheons and attendance at the various Radio Club Sales where one can often see an ALARA Table. We also look forward to the National and International MEETS where opportunities exist to meet face to face with interstate and overseas women operators.

This year Australia will be very well represented at the YL International MEET in Munich. Our current President and the co-ordinator of the MEET in Adelaide in 2012, Tina VK5TMC and her OM Robert VK5ZHW, will be attending along with Gwen VK3DYL who has attended a number of previous YL International MEETS. Dot VK3DB, the editor of the ALARA Newsletter with her OM John VK2ZOI, and Christine VK5CTY will also be present.

Watch this space! One or several reports will appear in this magazine after the MEET.

ALARA local news

VK2—Dot VK2DB

Michelle VK2FMYL has suggested a get-together in July to honour the ALARA birthday. Dot VK2DB has sent out invitations and is receiving positive replies. Various ideas have been mooted as to the location,

possibly a picnic in a park or a bring-a-plate affair in a hall somewhere. OMs and harmonics will be welcome. Further news after the event.

VK3—Margaret VK3FMAB

I am a member of the Eastern and Mountain District Radio Club. The basis for our local ALARA group commenced after a few YLs met upon completing their Foundation Licence Course. Our first luncheon was held in a coffee shop in the local shopping centre in July 2007. Since then the numbers have grown to include members from other VK3 clubs, both suburban and country. We now meet on a bi-monthly basis with some locations in the city area and others closer to the country members.

Initially the country people often drove to Melbourne with their OMs for company, word soon spread and local OMs managed to accompany their YLs and take the opportunity to meet up with other male operators in a social way. The answer to this was to arrange separate tables so each party could enjoy the conversational topics. It is certainly true that the male conversations tended to be far more technical than the female ones but not necessarily as interesting. Overall the luncheons have been voted a great success.

VK4—Pam VK4PTO

Pam VK4PTO of the Gold Coast group arranged the March luncheon at the Boardwalk Tavern, Hope Island. Six ALARA members and their OMs attended. It was lovely to have our newest VK4 members Sue VK4ST and Nicola Hill join us. We sat outside on the deck overlooking the boat harbour, ate fine food, and later enjoyed the live music. An enjoyable time was had by all.

VK6

Congratulations to Bev VK6DE who recently received her 30 year membership certificate from ALARA.

ALARA AGM

There was a good roll call for the AGM held on 3 May 2010. 17 stations participated. Reception on the night was varied.

The Chairperson Tina VK5TMC conducted the meeting.

Committee elections:

Office Bearers elected for the forthcoming year were as follows:

Tina VK5TMC remains President, Senior Vice-President is Lesley VK5LOL.

Junior Vice-President is Shirley VK5YL. The Secretary is Susan VK7LUV, who also holds the position of Librarian. Treasurer/ Membership Secretary/Souvenir Custodian is Margaret VK4AOE and the Assistant Treasurer/ Membership Secretary is VK4GH Katherine. Minute Secretary is Jenny VK5ANW/port3. There is a new Publicity Officer Margaret VK3FMB. The Sponsorship Secretary is Maria VK5BMT, Contest Manager is Lesley VK5LOL, and Awards Custodian is Kathy VK3XBA. Dot VK2DB remains the Editor and Sue VK5AYL is Historian. The Public Officer is Robyn VK3WX.

State representatives

VK7 has a new representative - Shirley VK7HSC. The position of VK4 representative is still to be filled. All other state representatives remain the same.

Constitutional review

This year ALARA will be reviewing the existing constitution. President Tina asks that anyone interested in becoming part of a sub-committee to undertake this task should contact her on vk5tmc@bigpond.com.

Continued overleaf

ALARA - 35 this year

As July is ALARA's birthday, there will be special luncheons held to celebrate the event. For further information about attendance at the ALARA lunches contact your local state representative via the email address given in the newsletter. You will be made most welcome.

At present I understand VK5 hold luncheons on the second Friday of the month at noon. The location is the City Museum cafeteria. VK6 has a monthly luncheon on a Thursday. VK3 members meet at various locations on a bi-monthly basis, normally on a Saturday as more people are able to attend on this day. VK2 do not hold monthly luncheons as they live far apart and many work or study but they do manage to meet up for lunch on a casual basis.

Please let me know if any other groups have formed so we can cover them in later columns.

WIA Centenary

The WIA Centenary AGM took place this year at Ridges Lakeside Hotel, Canberra from 28 - 30 May 2010.

A number of ALARA members were present including Jenny VK5ANW/3, Meg VK5YG, Marilyn VK3DMS, Jenny VK5FJA and Myrna VK5YW.

A PowerPoint presentation on ALARA was shown in the foyer outside the meeting room for the interest of participants.

This year one of the presenters was Norma O'Hare VK2YL. Norma's presentation was "The early years of ALARA - Ladies in amateur radio". Norma related how a small group of young ladies encouraged each other to participate in amateur radio further encouraged others to take an interest.



From this activity, during July 1975, LARA - The Ladies Amateur Radio Association was born in Victoria. A national organisation LARA (Australia)

ALARA travellers

Margaret Loft and her OM George VK3AGM travelled to Indonesia



for a son's wedding. She sent back a brief outline of the experience:

"We left Australia on 25/2/10 and flew via Singapore to Jakarta, on the island of

Java. We spent four days in Jakarta, mainly sightseeing. We then flew to Yogyakarta, also on Java, a 45 minute trip by plane, or eight hours by train..

The bride and groom wore traditional Western wedding outfits but other family members wore traditional Javanese outfits including George and me. There would have been 300-400 people at the catered evening wedding. People selected their own food and sat wherever they chose.

We also did a tour of Fort Canning also known as The Battle Box, which was the headquarters of the Malaya Command in WW2. It is an underground bombproof bunker of some 20 or so rooms, set up as a museum

and animated enactment of the lead up to the surrender of Singapore.

Margaret VK3FMAB and her OM Andrew VK3BFA cruised to New Zealand in February and enjoyed the experience of sea travel, good meals and service on board plus the opportunity to see something of the country itself. Life on board was wonderfully relaxing. There were activities and entertainment when you wished to participate or one could simply rest in the cabin or on the balcony watching the view. A very peaceful experience. The meals were superb and it took some control not to overdo it. I am not sure we were successful there.

We had some great experiences in New Zealand; especially noteworthy was a visit to Waimangu Volcanic Valley and a ride on the Taleri Gorge Railway from Dunedin. We sailed into the Fjordland National Park and cruised for hours amongst the magnificent scenery.



That's Margaret and her OM in centre of the group

came into existence in December 1976 and was re-named as ALARA in June 1978.

Other earlier women amateur operators will be mentioned along with an outline of current activities and changes in licensing rules and examination styles which have assisted the growth of female participation (Information from WIA website).

Urgent request to all ALARA members

Each July the cover of AR has an ALARA theme. If you have a great ALARA photo please let the Editor of AR, Peter VK3PF know on

editor-armag@wia.org.au

and discuss getting it to him.

If we use your shot we will give you a framed copy of the cover.

We need to have the photo by about the 8th of June, so do it

today
please

ALARA at the Midland ARC Expo

New net is one outcome

Jean Fisher VK3VIP

The ladies of ALARA participated in the three day expo in Bendigo hosted by the Midland Amateur Radio Club at the old fire station.

Jean VK3VIP (VK3 ALARA representative) and Margaret VK3FMAB travelled to Bendigo from Melbourne for a five day break and to run an information stall at the expo.

A great time was had and a number of new members signed up.

It was also decided that the ladies would start a net using the Mount Macedon repeater VK3RMM on a Tuesday evening at 7pm and we would like to extend an invitation to all YL's to join us as VK3RMM has a very wide coverage—it will allow both country and metropolitan stations to participate.



Margaret VK3FMAB working the stall.



The Old fire station on a lovely Easter day.



Jean VK3VIP and Monica (VK3FMON) represent ALARA.



Mark VK3GMF admires the radios of yesteryear.



Bendigo's Sun Loong who emerges each Easter

VHF/UHF An Expanding World

David Smith VK3HZ

vk3hz@wia.org.au

Weak Signal

David Smith VK3HZ

It is the season for some good inland tropo conditions via the slow-moving high-pressure cells. Phil VK5AKK, who is always a very good signal from his QTH in the Adelaide Hills, reports on his activities:

I had some good contacts in the last month, the best being tropo into Sydney on 21/3 at 2130 working VK2IDM and VK2IJM both 5x2 on 144.200. The last 2 m tropo into Sydney was back in the days of VK2ZAB.

The morning of 14/4 looked promising with easterly indicators looking good and I was having a day off. First worked was VK2EMA 5x2 then VK3JJ 5x7 on 144.100. About half an hour

later, I heard a weak VK1 working VK3. After a logger request for VK1 to beam west I worked VK1BG and VK1CJ (945 km) and then VK2FABV - all 5x1 on 144.200. Next was VK3KH 5x5, VK3XQ 5x3, VK3ZRT 5x2 and VK3DUT (875 km) at 5x1 on 144.100. Into the new (Zulu) day, I worked VK1ZQR 4x1 on 144.200 at 0020 Z.

Listening on the Mt William 2 m repeater later, I could hear another signal underneath. After finally getting the repeater to ident, I worked VK1KRF mobile on Mt Ginini (920 km) using my Diamond white stick omni antenna. I worked VK3II again 5x2 on 144.100 then rested after a hard morning's work!

Later in the month, on the evening of 28/4, the VK6REP beacon was heard at Phil's QTH. Unfortunately, no contacts resulted.

Then, on the morning of 29/4, Phil

again worked through VK1RGI Mt Ginini this time to VK2CMO. Later in the day, he again worked VK2FABV (5x2).

VK9NA Planning

It looks like the VK9NA team will be heading out to Norfolk Island again in the first two weeks of January 2011. Expectations are high following the good results from the last trip. If last year is any indicator, stations along the east coast will have a good chance to work them on VHF/UHF and Microwave bands.

So dust off the equipment and make sure it is in good operating condition so as not to miss out on this rare opportunity. Alan VK3XPD has assured me that he has booked excellent tropo conditions for the entire period!

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au.

Digital DX Modes

Rex Moncur VK7MO

2 metres FSK441

Welcome to John VK4TJ who is operational on 2 metres with FSK441. John's home location is obstructed to the south but by going portable to the top of a nearby hill he worked into Hobart.

1296 MHz QRP EME ON JT65C

With the large 25 metre Dutch dish PI9CAM at Dwingeloo operational on 18 April, the opportunity was taken to work them QRP on 1296 MHz. Dave VK2JDS (4.6 metre dish), Phil VK4CDI (3.7 metres) and Rex VK7MO (2.3 metres) all worked them on one watt both ways.

The following week Rex used a program produced by Glen VK1XX which automatically corrects for Doppler to improve system performance and worked PI9CAM at 0.5 watts or QRP.

Improving JT65C performance with Doppler Correction

Figure 1 below, which was produced with a signal generator and the transceiver adjusted with Glen's

program to simulate Doppler, shows the impact of Doppler on JT65C performance. At 1296 MHz, the change of Doppler can reach 12 Hz/min which means there is the

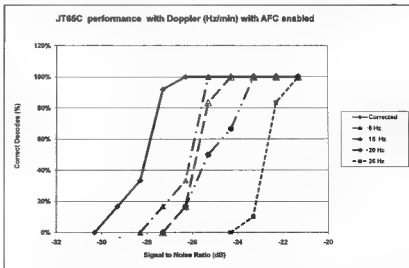


Figure 1: The performance of JT65c with rate of change of Doppler in Hz/min

potential to improve JT65C system performance by 3 or 4 dB by using Doppler correction.

Comparison of ROS and JT65

A series of tests have been undertaken by Jim VK3JJ (2 metres tropo-scatter), Dave VK2JDS (1296 MHz EME) and Ian VK3AXH (144 MHz EME) with Rex VK7MO. The conclusions from these tests are:

- ROS gives comparable weak signal performance to JT65a on 144 MHz tropo-scatter but takes longer to complete a QSO.
- ROS is 4 to 8 dB worse than JT65b for 144 MHz EME.
- ROS is not useful for 1296 MHz EME. While it can be made to work, by using Glen VK1XX's Doppler correction program to directly control the transceiver frequency via a hardware C/V interface, the performance is still at least 7 to 11 dB worse than JT65c.
- Operational features of JT65 such as time sequencing and short-hand messages give it a significant advantage over ROS in completing a marginal QSO.

A source of misunderstanding is that ROS reports decoding down to -35 and -36 dB, but this is on a different scale to the JT65 reports and 9 dB should be added to ROS signal reports to make them comparable to JT65 reports.

10 GHz Aircraft Scatter using JT65C

Dave VK3HZ and Rex VK7MO have conducted initial tests of aircraft scatter on 10 GHz between Mt Wellington near Hobart and Sunbury north of Melbourne over a 624 km path.

The path was chosen so that the direction of propagation lined up as closely as possible with the Melbourne to Hobart flight path so as to minimise Doppler variation and maximise the possibility of diffractive scattering (generally called aircraft enhancement or AE) as applies at VHF. The equipment comprised GPS-locked transverters and transceivers to minimise frequency drift, 45 and 65 cm dishes with 8 and 10 watts output. The initial tests were encouraging in that four or five decodes were

received from each of two aircraft over ten minutes at the Mt Wellington end (see Decode Table below) although no decodes were received at the Sunbury end.

Inspection of the JTSpec waterfall trace showed that the signal generally came in bursts of a few seconds somewhat like meteor scatter. This could well be due to specular reflection from parts of the aircraft rather than diffractive scattering that supports AE at VHF. It is also noted that all of the decodes above required the Deep Search decoder (0 in the second last column) despite that fact that reported signal levels were -22 and -23 dB which would normally decode on the WSJT Koetter-Vardy decoder. It is likely this is a result of the fact that the signals tend to come in short bursts and insufficient bits are received for the

023500	0	-33	3.6	-3	21				
023700	1	-27	2.8	11	4 *	VK7MO VK3HZ QF22	0	10	
023900	2	-24	2.8	8	5 *	VK7MO VK3HZ QF22	0	8	
024100	1	-22	2.9	8	5 *	VK7MO VK3HZ QF22	0	10	
024300	0	-23	3.7	5	5 *				
024500	0	-27	2.6	62	21 *	VK7MO VK3HZ QF22	0	10	
024700	0	-33	5.5	-482	3				
024900	0	-33	-0.8	-83	28				
025100	0	-33	-1.7	-436	26				
025300	0	-33	5.3	-479	12				
025500	0	-33	-0.8	-207	31				
025700	0	-33	2.7	-277	4				
025900	2	-28	2.5	24	4 *	VK7MO VK3HZ QF22	?	0	3
030100	3	-22	2.7	19	4 *	VK7MO VK3HZ QF22	0	10	
030300	2	-23	2.8	11	4 *	VK7MO VK3HZ QF22	0	10	
030500	2	-25	2.7	46	4 *	VK7MO VK3HZ QF22	0	10	
030700	1	-25	2.7	48	6 *	VK7MO VK3HZ QF22	0	10	
030900	2	-26	2.7	43	4 *				

Decode Table

Koetter-Vardy decoder.

More details of these tests including pictures showing the signal bursts on the waterfall are available on the web at: http://www.vk3hz.net/aep/AEP_on_10GHz.pdf

Please send any Digital DX Modes reports to Rex VK7MO at rmoncur@bigpond.net.au

The Magic Band – 6 m DX

Brian Cleland VK5BC

(Owing to a production oversight, last month's 6 m notes did not appear in the magazine. Both months are included here.)

March showed marked improvement in TEP conditions particularly from VK4 to JA with almost daily openings as well as contacts into China and Korea. Some of the significant reports received follow.

On March 5 Wade VK4WM Harvey Bay reported working over a 21 minute period beginning at 0520 UTC. JR2HCB, J11CUL, JH7XRZ, JA1RJU, JF3RDG, JA7IC, JH7UPW, JA2JXH, JR1UBR, JR0EQQ, JA9SJI, and J11VFZ. Then on 6 March Wade reported working 49 JA stations most at 5/9+ over a 1 hour period beginning 0500 UTC.

11 March proved to be an interesting day with again a good TEP from Japan

to VK4 (Townsville to Brisbane) with many VK4s working JAs. This opening was interesting in that it extended down from JA to FK8 and ZL2. Mark ZL2WHO in Palmerston North worked several JAs up to S7 and Pascal FK8IA in Noumea was reported by JR2HCB. Among the many JAs that Kevin VK4BKP in Mackay worked, Kevin worked DS2KGJ in South Korea and John VK4FNQ in Charters Towers worked Willem DU7/PAOHIP. Also on the same day Victor E51CG in Rorotonga reported hearing the KH6HI beacon.

On 12 March things were quiet down south but again VK4s worked JAs and

finally on 13 March the band opened to VK5 between 0530 UTC to 0800 UTC with several contacts being completed between VK5 and JA. Brian VK5BC reported working 17 JAs with Garry VK5ZK and Peter VK5PJ also working several JA stations. There were also a few contacts from JA into VK2, 3 and 7 completed with JR6EXN reporting contacts with VK3OT, VK3GV, VK3DUT, VK5ZK, VK5PJ, VK5ZW, VK3AMK, VK3OE, VK3FZ, VK3BDL, VK3AUU, VK4ZJB, VK4AHW, VK7AC, VK4DDC, VK4WTN, VK4FI and VK58C.

16 March was a quite day but late in the afternoon both the VK6RBU and VK6RPH beacons were audible in VK5 and the VK5RBU in VK6. Contacts then followed between the VK6s OX, JJ, ADI and AKT, and VK5s ZK, BC and AYD at Cooper Pedy. A little later Steve VK3OT near Hamilton also worked several VK6s. Around the same time Victor E51CG was hearing the KH6 beacons and worked Fred KH6Y.

17 March again saw a good opening from most areas of VK4 to JA. Gary VK4ABW near Townsville worked several JAs as well as DS4, 5 and 7 stations. Garry also worked Willem DU7/PA0HIP. Also same day an 'E' opening from northern VK4 with Gordon VK5KAA working John VK4FNQ and Brian VK5BC working VK4ABW, busy day for Gary.

20 March saw Ray VK4BLK at Yepoon work several JAs and a little later John VK4FNQ working several.

On 22 March, another opening to VK4, this time David VK5AYD at Cooper Pedy was in the action working JA3EGE. That evening Willem DU7/PA0HIP worked several stations in the Brisbane area including Adam VK4CF, another new one for Adam.

On 30 March, Harvey VK4AHW and Wayne VK4WTN from the Hervey Bay area worked many JAs.

From the Tablelands in far northern Queensland Dale VK4SIX reports that he and John VK4TL worked JA, DU7, VR2, BA4 and BX4 during the month.

Also on many evenings throughout the month the stations in northern VK including Mark VK8MS in Darwin and Gary VK4ABW Townsville area have been working DU7/PA0HIP and other northern stations in Japan and Korea.

A message from Willem DU7/PA0HIP summarising his summer season.

First I have to get something off my chest - When propagation happens, I noticed many times that many people are calling that cannot even hear me, many times ruining QSOs with people that CAN. The frustration is not only on the VK/ZL side, but certainly also at my end. It ruined QSOs with ZL2TPY, ZL1RS and ZL3AAU. I thought that only Europeans were like that (you should hear the mess when something special shows up on 6 m in EU, hi). It really is a shame....I can understand their eagerness to get a "new one", but in this way they only ruin their own chances. (and mine). A kW linear (my own PA0 linear) has been shipped to me and will hopefully arrive soon. Also I am planning to build a better antenna. So maybe next season the ZL/VKs will have a better copy of my signals and problems like that will belong to the past.....let us hope so.

Having said that; below is a summary of my VK/ZL summer season contacts.

13 Dec 2009: I worked VK6KXW (first VK6), and we tested during the next few weeks. It turned out that on most days (12 out of 14 days) I could detect his signals (keyer), like a pipeline.

15 Dec 2009: 0440 - 0800 UTC, spotty openings to VK3, 5 and 7. I worked 7 stations (including VK5BC/P, new grid!!) (3x VK3, 1x VK7 and 3x VK5)

17 Dec 2009: 0815 - 1030 good conditions to VK2, 3, 5 and 7, but not much activity from VK. I worked 1x VK2, 8x VK3, 7x VK5 and 3x VK7. Could have worked many more.

18 Dec 2009: short opening 0500 - 0545 UTC to VK3 (2x) and VK5 (2x), signals were very strong though (S8-9).

22 Dec 2009: 0520 - 0715 UTC very spotty opening to VK6, worked VK6JJ, KXW, JJ (SSB), ZKO, and heard VK6RO who faded out before completing QSO.

I had heard ZL3NW before very weakly but on 25 Jan 2010 it finally happened:

25 Jan 2010: 0420 - 0740 on/off conditions to ZL1, 2, 3 (worked ZL3NW (539/539 at 0426 UTC) for new one (amazingly good signals, 7721 km), QSOs with ZL1RS, ZL2TPY and ZL3AAU were ruined by weak VK2, 3 stations, who were heard both in ZL and by me (calling me).

Also conditions to VK2, 3, 4 and 5, I worked with 9 x VK2, 4 x VK3, 1 x VK4 (EK), 5 x VK5 (signals were not very strong but activity was good).

29 Jan 2010: 0630 - 0735 UTC weak opening to ZL3 and VK7, Heard ZL3NW (Rod had bad line noise, so no QSO), ZL3TY and ZL3AAU, but no QSOs. Did manage to work VK7AC, but was only VK heard here.

6 Feb 2010: around 0916 UTC strong propagation to VK8 (reckon, must have been Spread F or so) Worked VK8RR and VK8MS, both 59+ on SSB.

Well Brian that is it. For me, this season was much better than last year's (only 2 openings): Now have worked 31 grids in VK (1 in ZL).

Thanks Willem, it is great that there is a station in the Philippines which spends considerable time looking for contacts into VK/ZL and hopefully all operators are appreciative of your efforts and call at the appropriate time.

Received a very interesting message from Stuie VK8NSB in Darwin, Stule writes:

Two years ago I decided to venture onto 6 m and put a quarter-wave vertical up around November 8 ready for what the 6 m Guys were calling the Magic Band time of the year.

I was already aware of the VK LOGGER on the internet, using it for HF and had seen the 6 m page but had never ventured onto it thinking it was for Advanced operators only. I actually thought I would be ignored or told to leave if I went on the page because I was a Standard operator.

I decided to jump on the 6 m page and was amazed to find the 6 m guys were quite willing to help out with answers to my questions and willing to have QSOs with me on 52.100 SSB or split because of the Advanced guys antenna's cut for the bottom part of the 6 m band (50-51) only.

In the Xmas season of 2008, I worked 23 VKs and 2 ZLs on 6 m. When the band closed off in Feb/Mar 2009, I did not bother with it for most of 2009 and found that the Magic Band was very poor over Xmas 2009. I just happened to come upon a 3 element Yagi for 6 m on VKHAM classifieds and started working on putting it up on one of the towers I have here, finally getting it up around the end of January 2010.

One evening on the DXcluster, I saw Mark's (VK8MS) call sign spotted by JA and thought wow, 6 m is open so I rushed up to 6 m to listen and could

hear the JA quite clearly on the Yagi. I talked with Mark later that night and he explained about TEP, I had never heard of it before but was interested in learning more about this TEP.

Over the next two weeks I was lucky to have worked KH2, VR2, JA, DU and BV on both SSB and CW on 52100 and some QSOs using split 50 – 52. Both Mark VK8MS and John VK8JM helped me with some of the QSOs, asking the operators to go split for myself so that I could make the QSO.

I have noticed that on the VK LOGGER that there does not seem to be too many VK Standard operators active on 6 m. Why not? For the guys down in VK 1 to 7, 6 m looks fun with openings all around Australia, and as well as some good international DX openings.

With only 100 W and a 3 element Yagi I have had some great evenings on 6 m over the last couple of weeks thanks to TEP. I would say to those Standard operators out there give 6 m a go, it is easy to put up a vertical, dipole or even a beam for this band as it does not need massive space to do so.

Get on VK LOGGER and say g'day to the guys. They will not bite and you might find you actually enjoy this Magic Band. I had always said that 6 m was not really for me as I was a HF DXer and I was not going to get too serious about it, but over the last couple of weeks I have actually enjoyed this truly Magic Band.

Give it a go; yes as a standard operator you might be limited to the frequencies you can use on 6 m but you will be amazed how many guys will work you split or even come up on 52 100 to say g'day. I now keep my eyes on the 6 m chatter in VK LOGGER and the 6 m spots on the clusters I monitor.

Take it easy and catch you on 6 m from Darwin. De Stuie VK8NSB

Great to hear you are enjoying some great conditions on 6 m Stuie. I am sure it will only get better in the next couple of years as the sunspot cycle improves and of course it is always great to work VK8 stations from any where in VK. Also good that many stations are keeping an ear out for the standard licensees above 52 MHz.

(And on to this month ...)

After many good TEP openings in March the band quietened down in April with only a few TEP openings and the odd 'E' contact. Indicators from the China, Japan etc were heard in VK on several occasions in April but few contacts were reported, most from northern VK4 to JA.

On 2 April, the VK4RHT Atherton beacon was reported from Japan and Lloyd VK4FP worked JR2HCB. The Atherton beacon was again reported from Japan on 5 April along with the VK8VF Darwin Beacon. On this occasion Gary VK4ABW Townsville worked JR2HCB and John VK4TL Tolga worked JO3UGX. Norm VK3DUT. VK4SSB/2 heard the FK8 beacon.

On 5 April, John VK4FNQ Charters Towers reported hearing both the KH6HI and KH6HME Hawaii beacons between 0300 and 0400 UTC. John also heard both these beacons again on 6 and 8 April but despite calling no contacts eventuated.

6 April saw some local 'Es' with David VK4ZDP Innisfail work Wade VK4WM and Wayne VK4WTN both in the Hervey Bay as well as Denis VK4ACE Brisbane and short skip to Brian VK4EK Sapphire. A little later in the day Brian VK4EK worked JA6AZU.

With the help of some 'E' extension on 7 April, Norm VK3DUT worked JJ6WZS and Garry VK5ZK worked J6AZU. Around the time of the contacts Garry was hearing the Alice Springs VK8RAS beacon and worked John VK4FNQ.

The morning of 8 April, the band opened VK5 to northern VK4 with John VK4FNQ working Brian VK5BC and later in the afternoon a weak TEP opening Brian VK4EK worked JA1RJU.

9 April was interesting in that during the afternoon, multiple 49.750 MHz TV carriers from the China area were up to 59+ in southern VK4, VK3 and VK5. The JA2IGY beacon was also heard in VK5 but unfortunately no contacts were reported. At the time these signals were being heard the Atherton VK4RHT and Townsville VK4RTL beacons were audible in VK5 and Russell VK4BEG worked VK5ZK and VK5BC. Meanwhile a little further north Wade VK4WM Hervey Bay reported working 10 x JAs and Brian VK4EK Sapphire also working several JAs.

Garry VK5ZK had good day on 10 April working JG3GNU, JA5FFJ, JF1LXO and JM11GJ all on CW while several northern VK4s including Ray VK4BLK Yepoon, Gary VK4ABW Townsville and John VK4FNQ Charters Towers were in the action on both 10 and 11 working several JAs on both days.

Not much action then until 17 April when a good opening late in the afternoon from VK5 to northern VK2 and VK4 occurred. Brian VK5BC worked VK2BTS, VK4s QM and VN John VK4FNQ worked Mark VK8MS in Darwin.

Some good 'Es' again on 20 April David VK3AUU worked several VK4s including FL, CRC, DD EK, WM and WTN. Ron VK4DD worked Joe VK7JG, Gary VK5ZK and VK3s ALZ, AUU and OW and FZ while Brian VK4EK and Andy VK6OX heard the Alice Springs beacon. Garry VK5ZK also worked Wayne VK2XN. Later in the day a good TEP opening to Japan with Wade VK4WM working 11 x JAs and Brian VK4EK also working several JAs.

22 April - good opening from JA to northern VK4. During this John VK4FNQ, Dale VK4SIX worked LI BA451 Wujiang City, China. Adam VK4CP Brisbane also reported hearing LI.

24 April, VK4ZFC in Cairns worked several JAs.

On 25 April a good opening from ZL to VK with Bob ZL1RS working several VK2 and VK4 stations and Peter VK5PJ.

Stuie VK8NSB Darwin reports that on 27 April at 0129 UTC working Hide JR6EXN SSB 5/9 both ways and that TEP conditions were very strong to Darwin but only Hide on the band

Good early morning opening on 28 April from VK4 (Brisbane/Hervey Bay area) to VK5 with several contacts taking place and Brad VK2QO worked John VK4FNQ

If you are up early, Brad VK2QO coordinates meteor scatter contacts on 50 200 MHz from 2100 - 2200 UTC every morning. Several stations participate in this form of propagation with many good contacts completed on most days. Watch VK LOGGER to see the activity.

Please send any 6 m information to Brian VK5BC at brancieland@bigpond.com

DXnews & Views

John Bazley VK4OQ

E-Mail: john.bazley@bigpond.com

Recently Carl N4AA queried in his weekly Newsletter, "how many 'old timers' have given any thought to what will happen to all the QSLs that they have collected over the years. How would they be dealt with by the family on the Amateur becoming a Silent Key?" In truth I think the majority would say that they have done nothing about that aspect, and in all probability they would be 'binned'. I know that there are several people interested in collecting old QSLs, but are they really interested in receiving 1000s starting from over 60 years ago up to current receipts. It would be interesting to receive some feedback on this issue, which I will gladly pass along to Carl.

So from QSLs to DX.

Great news from The Microlite Penguins DXpedition team who will be activating the South Orkney Islands (DXCC VP8/O, IOTA AN-008) from 27 January to 8 February 2011. Safe and reliable Antarctic transportation has been secured by the experienced RV Braveheart, and activity will be on all HF bands 160 m-10 m using SSB, CW and RTTY.

Operators will be K9ZO, ND2T, 9V1YC, K0IR, N1DG, N0AX, W3WL, N6MZ, J8NHJ, N4GRN, W89Z, W7EW and VE3EJ. This will be the team's fourth time activating an entity in the Antarctic region and fifth DXpedition overall. You may recognize most of the call signs from the group's past operations, but we have also added several new members to the team, all of whom have been on DXpeditions to some of the world's rarest entities.

Those who have enjoyed our operations over the last eight years may recall that our methods and philosophy are somewhat different from other DXpeditions. Though our overall goal is still to provide a new DXCC entity on as many bands and modes as possible, we also strive to increase the fun factor by focusing on operational simplicity and radio skill.

In the past we kept the Microlite Penguins DXpeditions non-commercial and confined the financial burden to ourselves and a single sponsor, the NCDXF. But today, with the astronomical cost of Antarctic travel and a budget approaching US\$300,000, this single-sponsor approach is no longer a reality. To make this DXpedition happen, we must break our tradition and ask for support of the entire amateur radio community. All financial support, no matter what the amount will be welcome. We have even set up a website where DXers, clubs and foundations can donate online: <http://www.vp8o.com>

It is the support and encouragement of the DX community that will make this exciting Antarctic adventure a success.

Interestingly The South Orkney Islands are located at roughly the same latitude south as the Orkney Islands are north (60°S versus 59°N), although it is not known if this was behind the naming of the islands.

The Seychelles is certainly seeing a lot of activity this year. First from the GM team and then in May from RA9LR. If you missed both of these you can work Manuel Marques CT1BWW when he operates from the Seychelles National Park, with the callsign S79BWW from July 19 to 31. It will count for the WFF, World Flora and Fauna, award. S79bww@chx.pt

At the time of going to press Mike KM9D and Jan KF4TUG are currently moored off Malakal Island (OC-009), Palau. Mike recently obtained the call

T88CF. There are no other details yet of their operating plans.

SV1GRM, SV1HER and CT1GFK will be active as CQ8SV from Corvo Island (EU-089), Azores on 20-27 July, and IOTA Contest included. QSL via SV1GRM.

Paul K9OT and Peg K89LIE (hamradio.pnpfarms.com) will be active as FP/ homecall from Miquelon Island (NA-032) on July 5 to 14, including two single-operator entries in the IARU HF Championship. They will operate CW and SSB 80-10 metres with possibility of 160 m and 6 m if conditions are good. QSL via home calls, direct or bureau, and LOTW.

Pierre Tromp ZS1HF has been on Marion Island since early April and has now began activity as ZS8M. He has an IC-7200 and IC-7000 for rigs, along with an FL-7000 amplifier. At the moment he has dipoles for antennas. For the moment he will be favouring activity on SSB on 40, 20, 17 and 20 metres, although he plans to begin activity on the digital modes shortly. MM0NDX says Pierre may be erecting new antennas shortly - but due to the weather on Marion Island they will be very basic. QSL cards go via ZS1X, P.O Box 1481, Worcester, 6850, South Africa. See photo.



This is the base at Marion Island (ZS8) where a team of 10 to 15 men work for a year. Thanks to John W7KCN for the photo.

Three Japanese operators have announced their plans for a DXpedition to Wallis and Futuna followed by a short relaxed operation from Fiji afterwards. Mine JA2NQG/JE1CTM, Yuji JH2BNL, and Shige JI2UAY will be QRV from Wallis Island (OC-054) starting the afternoon of July 14 and leaving on the afternoon of July 21. They will be staying at the Hotel L'Albatros in Mata-Utu (same QTH as FW5X). Plans are to have three stations as follows:

- 1) IC-7000 plus Thamway DXV500L (500 W on 160-40; 300 W on 30-20), 14 metre high vertical with top-load wires on 160 and 80, wire vertical on 40, SPI-RO D-314 WARC band dipole in sloping dipole or vertical configuration.
- 2) FT-897 plus IC-2KL, 10 metre high vertical with a top-load wire on 75-40, 3 element beam on 20-15-10.
- 3) IC-736 and 2 element beam on 10.

In order to avoid mutual Interference (due to minimum antenna separation) only one station will be active at all times. They may have to limit their power output to 250 watts due to local regulations. Activity is expected on 1.8 through 28 MHz on CW, SSB, RTTY and they are hoping to try FM. QSL cards are expected to go via their home calls.

Once again Gregg VE3ZZ will be active from VY2TT's super station on Prince Edward Island (NA-029) from July 21 to 26. During the IOTA Contest (24-25 July) he will operate as VE2X, and outside the contest as VE3ZZ/VY2. QSL both calls via VE3ZZ, direct or bureau.

"Moj" DU9/PA3GZU will be active between 11 July and 7 August, "holiday style". He will be mainly on 20 metres but will also plan some activity on 40, 15 and 10 metres, depending on the conditions. He will be on SSB, BPSK31 and CW. Moj prefers you QSL via the bureau to his home call, but will also accept direct requests.

VK6AHR, "The Hills Amateur Radio Group", will be on for the IOTA Contest July 24 to 25 from Rottnest Island, OC-164. Operating will be VK6FDX, VK6TWO and VK6ZMS, on all HF bands. QSL bureau or direct to VK6AHR.

Bob W5UQ, San K5YY and Bill W5SJ are teaming up for an operation from Placencia, Belize between July 12 and 19, including the CQ WW VHF Contest. They will be operating as V31UQ, V31YY and V31SJ. San says he will be specifically looking for Europe and Asia.

Signing OZ/home call, DL4AMK, DK1AW, DJ2AS, DL3ARK, DL2AMT and DL1AZZ plan to be on Aro Island, EU-172, August 21 to 28. They will be on 80-10, SSB, CW, RTTY and PSK with at least three stations and 600 watts.

ON3CO, ON5ANN, ON5OO, ON5RA, ON7BT, ON7EQ, ON7LX and ON7TK will operate CW and SSB from the Chausey Islands (EU-039) from July 23 to 26. They will concentrate on taking part in the IOTA Contest as TM7T, but they will be active also before and after the IOTA event as F/homecall. QSL TM7T via ON7EQ, direct or via the bureau.

A large group of operators from the Radio Amateur Society of Crete will be active as J49A from Gavdos Island (EU-187) from July 24 to 26, IOTA Contest included. QSL via SV9GPV.

QSL 5R8AL: Phil Whitchurch G3SWH reports he has been appointed as the QSL manager for Alain 5R8AL. "The logs for 5R8AL's historic operations from 1975 to early 2010 are on paper and have not been uploaded to the ARRL's Log Book of the World", Phil says. "On-going logs will be available to me in an electronic format and will be uploaded as they become available". Details on G3SWH's QSLing policy, as well as an on-line bureau card request form, can be found at g3swh.org.uk

Good luck in the pile-ups until next month.

Special thanks to the authors of The Daily DX (W3UR), 425 DX News (H1JQ) and QRZ.DX for information appearing in this month's DX News & Views. For interested readers you can obtain from W3UR a free two-week trial of The Daily DX from www.dailydx.com/trial.htm

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The premier technical conference in VK

**Saturday July 10
Sunday July 11**

This event has a well-recognised reputation, with its focus primarily on techniques applicable in the VHF, UHF and microwave bands, especially for weak-signal contacts.

A *Partner's Tour* will be conducted, together with an informal social gathering for dinner on Friday and a Conference Dinner on Saturday.

GippsTech 2010 will be happening on the weekend of 10 and 11 July 2010, at Monash University Gippsland Campus, Churchill in Victoria, about 170 km east of Melbourne.

Details of the presentations offered to date, together with maps, an outline of accommodation options and a downloadable registration form are available from the Eastern Zone Amateur Radio Club website: <http://www.vk3bez.org/>

If you require directions, some help on the day or feel like a general rag chew whilst driving in with other amateurs, feel free to use VK3RLV 146.800 - or as a backup if you can not activate VK3RLV, call on VK3RWG 147.225 +. The club call sign VK3BEZ will be activated both days of the conference.

**Accommodation
options and a
downloadable
registration form are
available on**

www.vk3bez.org/

VK7news

Justin Giles-Clark VK7TW

Email: vk7tw@wia.org.au
Regional Web Site: reast.asn.au

Radio and Electronics Association of Southern Tasmania

REAST's April presentation was a tour of the Hobart ABC TV and Radio Studios. Attendees had a complete technical tour of the radio and TV facilities. Technical Manager Jim Parish and Damien Styles VK7HDS went through every aspect of what it takes to broadcast radio and TV.



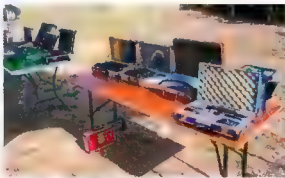
ABC Radio Hobart Tour – Radio Master Control

It was amazing! A photo montage video of this tour has been created and this has been placed into the ATV Experimenter's video library. A big thank you goes to Jim and Damien for their time and expertise in showing the group through the ABC facility.

WICEN Tasmania (South)

April 10 saw an impressive display of WICEN equipment at the REAST Clubrooms. Equipment included a fully equipped 12 m, winch up, trailer mounted tower and Roger VK7ARN's fully equipped trailer with an array of radios and computers displaying APRS and position data. Gary VK7JGD displayed his impressive

portable HF and VHF operating position and car stabilised tower and the WICEN tent housed an array of the portable radio equipment cases that WICEN use each containing a complete radio set. Thanks to all involved and especially Chris VK7FCDW – master chef on the day!



Masts, computers and radios galore – the modern WICEN setup!

VK7 Repeater News

Damien VK7HDS lets us know that there is a new 70 cm repeater now on North Bruny Island in the South of VK7. VK7RDS transmits on 439.750 MHz and receives on 434.750 MHz. No tone is required; it has a four minute timeout with an identifier every six minutes. Roger VK7ARN reminds us about the VK7RAD-1 APRS digipeater which is located on the Queen's Domain, Hobart and a big thank you to all who maintain and support this digipeater especially Scott VK7HSE who runs the APRS IGate in Southern VK7.

Northern Tasmania Amateur Radio Club

NTARC members gathered for the monthly meeting on April 14. Tony VK7YBG described what the newly re-invigorated WICEN North team has been up to in Northern Tasmania and what opportunities lay ahead for WICEN in the coming year. There has been proliferation of SignalLink USB sound cards in NTARC and this has lead to the May presentation topic covering amateur digital mode and activity on the amateur bands. More about this in next month's AR.

Cradle Coast Amateur Radio Club (CCARC)

Erratum for the April edition of AR; the CCARC committee members for 2010 were incorrect. The correct committee for 2010 are: President David VK7EX, Vice-President Steven VK7FXXX, Secretary David VK7DC, Treasurer Dick VK7FORF and Committee person Eric VK7FEJE.

North West Tasmanian Amateur Television Group

Thanks to David VK7DC for creating propagation maps for NWATVG's VK7RTV 2 and 6 metre repeaters. These are available on the clubs website: <http://www.2.vk7ax.id.au/atvgroup/propagation.html> There are now eQSO chat rooms available for NWATVG members. At the time of publishing there were two rooms – '101English' and 'ATV & SSTV' with the 101 English room connected to the VK7RTV 2 m repeater. For more information on this new internet based mode take a look at: <http://www.eqso.org>

JMMNFD report

Field Day on the hop on the Nullarbor

John Howlett VK6ZN and operator Mei

I was travelling from Perth across the Nullarbor with Mei, a travel companion from VP2, Hong Kong, when I mentioned the JMMNFD and to my surprise she was very interested in amateur radio.

We drove down a track, and as luck had it found a disused power pole. Using my fishing rod I cast a line over the arm of the pole, Mei measured off some galvanised fence wire, a balun was attached and we had an OFC dipole up and running.

The generator was checked before leaving Perth but now failed to start! Fuel and spark were there but no action. A careful look at the gasket between the carburettor and the intake showed slight damage, a new gasket was made from a piece of cardboard and the generator fired up first time.

Mei practiced using VKCL software and we were ready for the contest start next morning. We took turns operating all Saturday and into early Sunday morning, then had a sleep. With about three hours left in the contest the generator again failed to start, so we decided that Mei would operate on reduced power to conserve the batteries, while I fixed the generator problem.

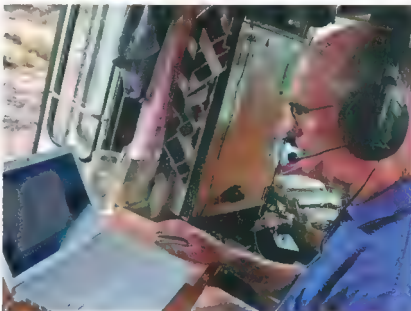
With some daylight the solar panels started charging the batteries. This time the starting problem was an oiled up plug, the oil mixture was wrong and it took a while to get the fuel sorted out; and we were now running short of fuel.

During the last two hours Mei made many contacts which made up for a thin Saturday evening when propagation for us was poor on 80 metres

We wish to thank the many operators who showed Mei patience and understanding as she had difficulty listening to SSB "Are there any more contests" Mei asked, so the next week end we worked the CQ WPX,



Mei filling the generator.



John VK6ZN entering contact details into the VKCL logging software.

Mei learnt Morse in two days and will get a licence when she returns home.

It was a fun and rewarding JMMNFD which we shall not forget.

The equipment used was an Icom IC-7400, 100 watts, and an off centre fed dipole.

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Contests

Craig Edwards VK8PDX
vk8pdx@yahoo.com.au

CONTEST CALENDAR

June	5-6	SEANET Contest	CW/SSB
	12-13	VK Shires	CW/SSB
	12	Trans Tasman 160 m	SSB
	19-20	Winter VHF/UHF Field Day	CW
	19-20	All Asia DX Contest	CW
	26-27	King of Spain	SSB
	26-27	Ukrainian DX DIGI Contest	PSK/RTTY
July	3-4	DL-DX RTTY Contest	RTTY/PSK
	10-11	IARU HF World Championships	SSB/CW
	24-25	IOTA Contest	SSB/CW

The second year of the Australian VK Shires Contest is on our door step. The first one was lots of fun and many VK operators were lighting up 40 m and 80 m at night, although there was not much activity during the day on 20 m or 15 m.

Hopefully that will change this year and probably more overseas participants

will learn about this fun event. In early July it is the 2010 IARU HF World Championships, it is like an Olympic year as this coincides with the World Radio Team Championship in Russia.

On the Friday night I will have to pull out the old 2002 Finland WRTC DVD to get me in the mood.... Sad to know. I am really looking forward to this event as I

was holidaying in Townsville at the time and could not really participate.

Hopefully some of my new antenna would have arrived and be fully operational too. For a full explanation of the World Radio Team Championship and how it fits into the IARU HF World Championships contest, please visit www.wrtc2010.ru

IARU HF World Championships

Object: To contact as many other amateurs, especially IARU member society HQ stations, around the world as possible using the 160, 80, 40, 20, 15 and 10 metre bands.

Date and Contest Period: The second full weekend of July, beginning 1200 UTC Saturday and ending 1200 UTC Sunday (July 10-11, 2010). Both Single and Multi operator stations may operate the entire 24-hour period.

Entry Category: Single Operator

Phone only – High, Low and QRP power levels

CW only – High, Low, and QRP Power levels

Mixed mode – High, Low and QRP Power levels

One person performs all operating and logging functions. Use of spotting nets, packet, or multi-channel decoders (such as CW Skimmer) is not permitted. Single-operator stations that use spotting nets, packet or multi-channel decoders will be reclassified to the Multi-operator, Single Transmitter category. All operators must observe the amateur radio regulations of their country at all times. Single operator stations are allowed only one transmitted signal at any given time.

Entry Category: Multi Operator,

Single Transmitter, Mixed Mode only.

A station must remain on a band and mode for at least 10 minutes before changing bands or modes. Only one transmitted signal is allowed at any given time. You are not allowed a second radio that works only multipliers. All operators must observe the amateur radio regulations of their country at all times. Violation of the band change rules will reclassify the entry as a checklog.

IARU Member Society HQ Station

A HQ station may have only one transmitted signal per band mode (160 CW, 160 Phone, 80 CW, 80 Phone, 40 CW, 40 Phone, 20 CW, 20 Phone, 15

CW, 15 Phone, 10 CW, 10 Phone) at the same time. All stations involved in an HQ operation must be in a single ITU zone. Only one HQ station call sign per member society per frequency band is permitted. All operators must observe the amateur radio regulations of their country at all times.

Contest Exchange: ARU member society HQ stations send signal report and official IARU member society abbreviation. IARU International Secretariat club station NU1AW counts as a HQ station. Members of the IARU Administrative Council and the three IARU regional Executive committees send "AC" "R1," "R2," and "R3" as appropriate. All others send signal report and ITU zone.

Valid Contact: The same station may

be worked once per mode per band for QSO credit. Mixed-mode entries may work a station once per mode per band. A station may only be worked for credit in the portion of the band that is generally accepted for the mode used. On any band, a station may be worked once on Phone (in the Phone segment) and once on CW (in the CW segment). Cross mode, cross band and repeater contacts are not valid QSOs. Where contest-preferred segments are incorporated into regional band plans, participants must observe them. Use of self-spotting techniques on packet or other mediums are inconsistent with the spirit and intent of these rules.

Points: Contacts within your own ITU zone, as well as QSOs with any IARU-member society HQ station or IARU official (counting as the special multiplier), count one point each. Contacts with a station in the same ITU zone, but on a different continent, count one point. Contacts within your continent (but different ITU zone) count three points. Contacts with a different continent and IARU zone count five points.

Multipliers: The total number of ITU zones plus IARU member society HQ stations worked on each band (not mode). IARU officials represent a maximum of four multipliers per band (AC, R1, R2 and R3). IARU member society HQ stations and officials do not count for zone multipliers. To qualify as the special multiplier, Administrative Council and Regional Executive Committee stations must only be operated by the individual station licensee as single operator entry.

Scoring: The total number of QSO points times the total number of multipliers worked.

Awards. A certificate will be awarded to the high scoring entry in each category in each ITU zone, each DXCC country and each ARRL Section. A certificate will be awarded to the high scoring IARU member society HQ station. Achievement level awards will be issued to those making at least 250 QSOs or having a multiplier total of 75 or more. Additional awards may be made at the discretion of each country's IARU member society.

For more information please visit www.iaru.org/contest.html

Islands on the Air (IOTA) Contest 2010 - Provisional rules

Objective: to promote contacts between stations in qualifying IOTA island groups and the rest of the world and to encourage expeditions to IOTA islands.

Date/Time: 1200 UTC Saturday 24 July to 1200 UTC Sunday 25 July 2010

Bands/Modes 3.5, 7, 14, 21 and 28MHz, CW and SSB. IARU band plans must be observed, with CW contacts being made only in the recognised CW ends of the bands (see RSGB Yearbook and similar sources, for recognised IARU band plans). Contest-preferred segments must be observed, no operation to take place on 3500-3510, 3560 - 3600, 3650 - 3700, 14060 - 14125 and 14300 - 14350 kHz.

Categories

All entrants must operate within the limits of their chosen category when performing any activity that could impact their submitted score. All equipment (transmitters, receivers and antennas) plus all operators must be located within a 500 m diameter circle or within the property limits of the station licensee's address, whichever is the greater.

Locations:

Island (Any station operating from a qualifying island, as listed in the IOTA Directory. Island stations must ensure beforehand that the island from which they are operating is a valid qualifying island for IOTA. Any questions about the IOTA programme and island validity should be addressed to the IOTA Manager (see RSGB IOTA Web site).

World (any station not on a qualifying island).

Operators:

Single operator QSO alerting assistance of any kind (this includes, but is not limited to, packet, local or remote Skimmer and/or Skimmer-like technology, Internet) places the entrant in the Single-operator Assisted category.

Single-operator Assisted One person. One signal at any one time. QSO alerting assistance is allowed (this includes, but is not limited to, packet,

local or remote Skimmer and/or Skimmer-like technology, Internet) Self-spotting or asking to be spotted is not allowed

Multi-Operator (24-hour Mixed Mode only. Multi-ops are restricted to a maximum of two transceivers, the second station to be used to find and call other stations only if the station is a new multiplier. It must not be used to solicit other contacts, e.g. by calling "CQ" or "QRZ". Any non-multiplier QSOs made accidentally on the second station must be logged, but will be scored as zero points. QSO alerting assistance is allowed (this includes, but is not limited to, packet, local or remote Skimmer and/or Skimmer-like technology, Internet). Self-spotting or asking to be spotted is not allowed. Multi-operator entrants should include a full list of operators with their entry).

Mode: CW, SSB or Mixed-mode (multi-operator entries must be Mixed Mode).

Operating Time: 24 hours or 12 hours (Multi-operator entries must be 24 hours. In the 12-hour categories, operation need not be for one continuous 12-hour period but, once operation has commenced, off periods must be a minimum of 60 minutes.).

Power:

High-power (maximum, as permitted by the station licence but, in any case no more than 1500 watts output).

Low power (maximum 100 watts output).

QRP (maximum 5 watts output).

Exchange: Send RS(T) and serial number starting from 001, plus IOTA reference number if applicable (island stations MUST include the IOTA reference as part of their exchange). Do not use separate numbering systems for CW and SSB. Stations may be contacted on both CW and SSB on each band. Multi-operator entrants may find it convenient to allocate separate blocks of serial numbers for the run and multiplier stations, but do ensure if possible that there is no duplication of serial numbers

Scoring: All entrants can work anyone, island or non-island. Contacts with non-island stations count 3 points. Contacts with IOTA islands count 15 points except that, if you are on

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John Moyle Memorial National Field Day 2010 Results

This year's entries came from every Australian mainland call area, as well as from Tasmania and New Zealand. The total number of logs submitted was 122.

This was only a minimal decrease from 123 logs received last year. It was good to see several ZL stations take part this year, but only one submitted a log. Well done to all who took part.

24 Hour Portable Operation – Multiple Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Place /Award
VK3CNE	Multi	Phone	All	609	3396	1 st
VK2WG	Multi	Phone	All	589	2348	2 nd
VK4MS	Multi	Phone	All	593	2124	3 rd
VK3ANR	Multi	Phone	All	357	2044	4 th
VK2HZ	Multi	Phone	All	470	1906	5 th
VK2MA	Multi	Phone	All	451	1891	6 th
VK3JII	Multi	Phone	All	72	1428	7 th
VK6ARG	Multi	Phone	All	177	465	8 th
VK8AHR	Multi	Phone	All	188	342	9 th
VK4WSS	Multi	Phone	All	42	182	10 th
VK3FRC	Multi	Phone	VHF	256	3268	1 st
VK2EH	Multi	Phone	VHF	147	2880	2 nd
VK3LY	Multi	Phone	VHF	114	2680	3 rd
VK4WIE	Multi	Phone	VHF	136	348	4 th
VK4RC	Multi	Phone	VHF	35	125	5 th
VK3ER	Multi	All	All	724	6178	1 st /
VK2SRC	Multi	All	All	848	3545	2 nd
VK2BV	Multi	All	All	588	1828	3 rd
VK2AWA	Multi	All	HF	1689	4904	1 st
VK4IZ	Multi	All	HF	1357	3118	2 nd
VK2MB	Multi	All	HF	93	192	3 rd
VK2AWX	Multi	Phone	HF	587	1174	1 st
VK4OJ	Multi	Phone	HF	576	1152	2 nd
VK5LZ	Multi	Phone	HF	522	1042	3 rd
VK4WAT	Multi	Phone	HF	470	940	4 th
VK2AZD	Multi	Phone	HF	463	928	5 th
VK5BAR	Multi	Phone	HF	393	770	6 th
VK6ZN	Multi	Phone	HF	158	316	7 th
VK8DA	Multi	Phone	HF	130	280	8 th

IOTA Rules continued

an island, contacts with your own IOTA reference count 3 points. The multiplier is the total of different IOTA references contacted on each band on CW, plus the total of different IOTA references contacted on each band on SSB. Multi-op stations may not work members of their own group for multiplier credit.

Total Score - The score is the total of QSO points on all bands added together, multiplied by the total of multipliers.

Awards: Certificates will be awarded to leading stations in each category and section, and in each continent, according to number of entries. A large number of Awards and Trophies is now available, and new sponsors are always welcome. Please see the full list on the RSGB HFCC Web site.

For more information visit www.rsgbcc.org/hf/iota.shtml

Six Hour Portable Operation – Multiple Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Place /Award
VK3AWS	Multi	Phone	All	335	1471	1 st
VK5SR	Multi	Phone	All	214	1342	2 nd
VK4ZY	Multi	Phone	All	112	375	3 rd
VK4BAR	Multi	Phone	All	43	159	4 th
VK2SF	Multi	Phone	HF	85	170	1 st
VK1VIC	Multi	Phone	HF	59	118	2 nd
VK3ACZ	Multi	Phone	HF	11	22	3 rd
VK4CHB	Multi	All	HF	127	246	1 st
VK3XPD	Multi	All	VHF	72	1077	1 st

1st Certificate Awarded 2nd President's Cup 3rd Participation Certificate

24 Hour Portable Operation – Single Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK4OE	Single	Phone	All	132	1320	1 st
VK3VCL	Single	Phone	All	144	1058	2 nd
VK3JOW	Single	Phone	All	107	284	3 rd
VK4KKD	Single	Phone	All	97	273	4 th
VK3VIL	Single	Phone	All	34	175	5 th
VK5ZT	Single	Phone	VHF	154	1485	1 st
VK5FAN	Single	Phone	VHF	141	1428	2 nd
VK3JTM	Single	Phone	VHF	75	1300	3 rd
VK4GH	Single	Phone	HF	489	978	1 st
VK2HBG	Single	Phone	HF	452	904	2 nd
VK5UV	Single	Phone	HF	219	438	3 rd
VK2CZ	Single	Phone	HF	83	164	4 th
VK5DG	Single	Phone	HF	60	120	5 th
VK3ZPF	Single	Phone	HF	58	116	6 th

Six Hour Portable Operation – Single Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK2IO	Single	Phone	VHF	81	428	1 st
VK2MER	Single	Phone	VHF	40	295	2 nd
VK5FMJF	Single	Phone	VHF	43	206	3 rd
VK2AMS	Single	Phone	VHF	24	123	4 th
VK4JAZ	Single	Phone	VHF	12	32	5 th
VK2AYD	Single	CW	VHF	8	24	1 st
VK5AGZ	Single	Phone	All	121	884	1 st
VK3JIL	Single	Phone	All	84	437	2 nd
VK3FUNK	Single	Phone	All	100	393	3 rd
VK4ADC	Single	Phone	All	110	382	4 th
VK3VTH	Single	Phone	All	83	162	5 th
VK8KTV	Single	Phone	All	64	146	6 th
VK7JGD	Single	Phone	HF	113	226	1 st
ZL2AYZ	Single	Phone	HF	98	198	2 nd
VK3YE	Single	Phone	HF	50	100	3 rd
VK6KMS	Single	Phone	HF	47	94	4 th
VK2MJB	Single	Phone	HF	20	40	5 th
VK2DRB	Single	Phone	HF	17	34	6 th
VK2JNA	Single	Phone	HF	15	30	7 th
VK5FNET	Single	Phone	HF	9	15	8 th
VK2AWJ	Single	Phone	HF	7	14	9 th

1st Certificate Awarded 2nd President's Cup 3rd Participation Certificate

Home Station – 6 Hour

Call Sign	Operator	Mode	Band	Contacts	Score	Award
VK2MCI	Home	0	0	163	238	1 F
VK3AFK	Home	0	0	100	155	2 F
VK2VTH	Home	0	0	93	136	3 F
VK2LTB	Home	0	0	56	85	4
VK3DMK	Home	0	0	49	82	5
VK4JRO	Home	0	0	47	80	6
VK4DGO	Home	0	0	44	76	7
VK3NBV	Home	0	0	44	71	8
VK6CG	Home	0	0	36	62	9
VK2IRP	Home	0	0	28	46	10
VK4CC	Home	0	0	20	38	11
VK3IWI	Home	0	0	20	36	12
VK2DCR	Home	0	0	18	26	13
VK6DXI	Home	0	0	1	4	14

Home Station – 24 Hour

Call Sign	Operator	Mode	Band	Contacts	Score	Award
VK2LAW	Home	0	0	733	994	
VK5LSB	Home	0	0	478	663	2 F
VK7FWAY	Home	0	0	448	657	3 F
VK2AFY	Home	0	0	513	551	4 F
VK1HW	Home	0	0	399	538	5 F
VK3HBA	Home	0	0	311	449	6
VK4HO	Home	0	0	284	435	7
VK5MWH	Home	0	0	276	396	8
VK2FAJA	Home	0	0	229	373	9 F
VK4MIT	Home	0	0	232	352	10
VK3KIS	Home	0	0	148	251	11
VK3XH	Home	0	0	151	248	12
VK1LW	Home	0	0	140	237	13
VK4HEC	Home	0	0	127	213	14
VK2BGL	Home	0	0	126	210	15
VK2BXT	Home	0	0	122	210	16
VK4ATH	Home	0	0	157	167	17
VK5KBJ	Home	0	0	78	122	18
VK4CCR	Home	0	0	77	121	19
VK5PX	Home	0	0	76	121	20
VK5FD	Home	0	0	75	119	21
VK3DIP	Home	0	0	54	103	22
VK2YJS	Home	0	0	49	83	23
VK2BLW	Home	0	0	37	65	24
VK3EI	Home	0	0	38	64	25
VK2NR	Home	0	0	36	62	26
VK4PJG	Home	0	0	40	59	27
VK5HSE	Home	0	0	30	58	28
VK5QM	Home	0	0	29	55	29
VK4BAY	Home	0	0	41	50	30
VK2ZC	Home	0	0	28	47	31
VK5EMI	Home	0	0	22	36	32
VK5DK	Home	0	0	21	36	33
VK3IFM	Home	0	0	19	30	34
VK5NY	Home	0	0	13	23	35

I have included all of the results received. If any are missing, they are completely lost, my apologies to anyone so affected.

There were some 23,573 contacts, amounting to some 80,087 points claimed, a 14% increase over 2009. This was pretty heavy contesting, but unfortunately just 122 logs.

The number of stations who went to the considerable trouble of going portable and then not bothering to submit a log as an entry, is still a disappointment. Some multiple operator stations got very big scores this time and perhaps it simply reflects the great and varied planning and implementation efforts required to assemble and operate a multi-operator station without operation on one band wiping out the efforts on another band?

Activity was on all bands permitted under the rules. There was very noticeably increased activity on HF, and the frequencies in use followed the low sunspot cycle. This is still at the bottom of the cycle and conditions did not improve much this year, with only 160m, 40m and 15m showing significant increase and 80m & 10m a decrease.

In the higher UHF and Microwave bands there was much less activity than 2008, but around the same as 2009. Maybe it follows a weather cycle, rather than the solar cycle?

The scoring in the UHF and also VHF range was around the same as for last year, but both were down on 2008 levels.

This year saw an increase in Portable Station operation, and a significant decrease in Home Station operation. Perhaps more contestants went portable to take advantage of the kinder weather? Additionally and clearly here were some portable station operators who did not bother to submit a log and are strongly encouraged to do so next year.

The scoring on VHF was revised in 2009 and it reduced the difference between scores produced on VHF and the scores on HF. However the effort required getting a high score on HF, out weighs the comparative effort on VHF. However, this is the nature of contesting.

All of the portable stations that went to the effort to send in a log got a certificate. The WIA believes that people who made the effort to set up a portable station and operate should be acknowledged. In line with last year, the Foundation License logs who did not achieve a place, were instead awarded a Participation Certificate for encouragement.

Only Six Foundation Licensed operators submitted a log, although there were many more stations than this logged during the contest. All logs submitted by foundation operators were awarded a certificate.

All electronic logs submitted this year, were fully readable.

Next year, club stations will only be eligible to submit an entry, if their log is submitted electronically.

This year, the rules stated that EXCEL is the preferred submission format.

All logs submitted in an electronic form this year, were fully readable.

This is a synopsis of the very extensive report prepared by Denis Johnstone (VK4AE/VK3ZUX) Contest Manager. Space precludes the insertion of the full report in Ar but those who are intent on contesting this event next year should go to the full report posted in the WIA website to be better prepared.

FOR SALE - VIC

Yaesu HF package, FT-707 transceiver, FC-700 antenna tuner, FR-700 20 amp power supply. \$800 ONO.

Yaesu FT-7B transceiver, 100 watts, with mobile bracket and hand mike. \$400 ONO.

Yaesu FT-290R all mode transceivers, two of, each with Alinco ELH 230 amplifier, 3 W in-30 W out. \$275 each ONO

Kenwood TM-231A 2 metre FM mobile, with bracket. RX 136-174 MHz. 50 watts out. \$300 ONO.

Diawa 620 X needle power meter. 1.8-150 MHz. \$150 ONO.

Antenna switch for HF, 1 in 2 out. \$40.

Homebrew antenna switch, 1 in-5 out, \$10.

Offers invited for Nally tower fitted with HF antenna, rotator and controller. Buyer to remove. \$1200 ONO.

Enquiries to Ken Castles VK3CSM. Phone 03 5144 3632 or email: nuff@netspace.net.au

Post 2000 equipment for a complete HF/VHF/UHF multi mode station, \$750.00 or offer.

To arrange on site inspection at VK3ANJ premises, phone, or email linlawless6@bigpond.com

Lindsay VK3ANJ, phone 03 5155 1380.

FOR SALE - NSW

Radio tower, galvanised, tilt-over, extends to 10.9 metres, lowers to approximately 6 metres. Wind up cable needs replacing. Located in Sydney. \$150.00.

Contact Bill VK2ATP, 02 9971 7151, mobile 0417 257 692, or email: karinpeters@west-net.com.au

WANTED - NSW

Circuit/schematic diagram for a HEATH VTVM, model number IM-13. Any other information on this piece of equipment would be appreciated. Many thanks

David VK2IX QTHR, phone 02 4751 6124.

FOR SALE - SA

VK5JST Antenna Analyser kits. See AR article May, 2006/December, 2009. Build yourself

an extremely useful item for your shack, and improve your HF antenna efficiency.

For more details see www.scarc.org.au; contact SCARC, PO Box 333, Morphett Vale, SA.

5162, or email. kts@scarc.org.au

WANTED - SA

Operator's manual, or any information for the Eddystone 990R VHF receiver, 30-220 MHz, 1970s vintage. A Copy will be OK, and I will reimburse cost, including mail.

John Parsons VK5CJP, 24A Wattle Street, Lobethal. SA. 5241 Phone 08 8399 5306 QTHR.

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Contact Neil VK6NE QTHR, or phone 08 9409 9333 or email vk6ne1@bigpond.com



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... a radio communications service for the purpose of self training, intercommunication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique with a personal aim and without any pecuniary interest. 56 ITU Radio Regulations.

Contact

Phone 03 9729 0400 Fax 03 9729 7325
10 am to 4 pm daily

nationaloffice@wia.org.au <http://www.wia.org.au>

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Chairman of the regional committee is in bold.

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Trevor Wardrope VK8TJW
Wayne Cockburn VK8ZAA

WIA Centenary Award

A limited issue amateur radio operating award is available to celebrate the 100th year of the Wireless Institute of Australia (WIA), the world's oldest national radio society.

To qualify for an award contact is required with the Centenary of Organised Amateur Radio in Australia special event station VK100WIA. A distinctive QSL will be available.

The WIA, through its affiliated radio clubs, will operate this unique callsign from 1 May to 31 October 2010. The callsign will also be used Canberra, where the WIA Annual General Meeting and associated events will be held 28-30 May.

It will be on all amateur bands available to VK radio amateurs including the popular HF bands and the WIA Centenary Award is expected to be well sought after.

The award rules are: Those radio amateurs outside Australia need to achieve 50 points while VK hams require 100 points.

A contact with VK100WIA operated by the WIA or operated by a Club is worth 10 points (only one contact with VK100WIA operated by the WIA and only one contact with each Club) and there must be a minimum of two contacts with VK100WIA.

Contacting any WIA member between 1st May 2010 and 31 October 2010 is worth five points (Example: working



VK100WIA at 10 different Clubs would be eligible for the award. Working 16 WIA members gives 80 points but then two contacts must be made with VK100WIA).

Any mode may be used; cross-mode and cross-band contacts are permitted. Satellites and repeater contacts are permitted for this award. Send AU\$ 5 or 3 IRCs and a list of contacts (QSLs not required) to the Awards Manager WIA Centenary Award, PO Box 2042, BAYSWATER VIC 3153 AUSTRALIA.

Listen around the bands or visit the WIA website www.wia.org.au for frequent updates of the operator club's roster.



Centenary Merchandise

Celebrate the Centenary in style

To help members celebrate the WIA Centenary, a range of 'limited edition' Centenary merchandise is now available for online purchase via the Centenary Merchandise section of the WIA website.

The merchandise below sports the WIA 100 Years Centenary logo and is being expanded to include many other commemorative items and memorabilia. Members are encouraged to keep an eye on the WIA website for all the latest products. Visit www.wia.org.au and click the Centenary logo on the right hand side of the home page.

All shirts and jackets are available in the following sizes: Small, Medium, Large, X-Large, XXX-Large.

Please note: all prices below are WIA member prices and are inclusive of GST, delivery charges are calculated with your online order.



Centenary polo shirt: \$25



Centenary tie/ jacket pin: \$8



Centenary bucket hat: \$12



Centenary cap: \$12



WIA Centenary poster A1 size: \$10



WIA Calling CQ poster A1 size: \$10



Centenary shirt short sleeve black: \$32



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